Changing Channels: The Impact of the Internet on Distribution Strategy

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In simple markets of old, producers of goods or services dealt directly with the consumers of those offerings. In some modern business-to-business markets, suppliers also interact on a face-to-face basis with their customers. In most contemporary markets, however, mass production and consumption have lured intermediaries into the junction between buyer and seller. These intermediaries have either taken title to the goods or services during the flow from producer to customer, or in some way facilitated this by specializing in one or more of the functions that must be performed for such movement to occur. These flows of title and functions, and the intermediaries who have facilitated them, have generally come to be known as *distribution channels.*

For most marketing decision makers, dealing with the channel for a product or service ranks as one of the key marketing quandaries. In many cases, despite what the textbooks suggest, there is frequently no real decision as to "who" should constitute the channel; rather, the question is how best to deal with the incumbent channel. Marketing channel decisions are critical also because they intimately affect all other marketing and overall strategic decisions. Distribution channels generally involve relatively long-term commitments, but if managed effectively over time, they create a key external resource. Small wonder, then, that they exhibit powerful inertial tendencies, for once they are in place and working well, managers are reluctant to fix what is not broken.

Here we contend that a new medium—the Internet and the World Wide Web—will change distribution like no other environmental force since the industrial revolution. Not only will it modify many of the assumptions on which distribution channel structure is based, in many cases it will transform and even obliterate channels themselves. As a result, many intermediaries will die out, while new channels and new intermediaries will take their places.

The new electronic medium is ravaging traditional distribution philosophy, rendering many conventional intermediaries and channels obsolete.

What is the Purpose of a Distribution Strategy?

In 1958, Wroe Alderson summarized the importance of distribution, stating that the "goal of marketing is the matching of segments of supply and demand." Three decades later, Stern and El-Ansary defined a distribution channel as "sets of independent organizations involved in the process of making a product or service available for use or consumption." Quite simply, the purpose of a distribution channel is to make the *right* quantities of the *right* product or service available at the *right* place, at the *right* time. What makes distribution strategy unique vis-à-vis other marketing mix decisions is that it depends almost entirely on physical location. The old saying among retailers is that the three keys to success are the "three Ls": location, location, location.

Alderson argued that intermediaries provide economies of distribution by increasing the efficiency of the process. They do this by creating time, place, and possession utility—right product, right place, right time. He maintained that intermediaries fulfill three basic functions, which Stern and El-Ansary have distilled into the following three essential purposes of distribution channels:

Business Horizons

1. Intermediaries support economies of scope by adjusting the discrepancy of assortments. Producers supply large quantities of a relatively small assortment of products or services, while customers require relatively small quantities of a large assortment of products and services. Through the process of exchange, intermediaries create possession utility, in addition to creating utility of time and place. Such activities, referred to as **reassortment/sorting,** comprise the following:

• *sorting*, which consists of arranging products or services according to class, kind, or size;

• *sorting out*, which would refine sorting by, for example, grading products or output;

• *accumulation*, which involves aggregating stocks from different suppliers, such as household equipment manufacturers or book publishers;

• *allocation*, which is really distribution according to a plan—who will get what the producer has produced. This typically involves an activity such as "breaking bulk."

• *assorting*, which means putting an appropriate "package" together. Thus, a men's outfitter might provide an assortment of suitable clothing —shirts, ties, trousers, socks, shoes, underwear.

2. Intermediaries **routinize** transactions so that the cost of distribution can be minimized. Because of this, transactions do not need to be bargained on an individual basis, which would tend to be inefficient in most markets. Routinization facilitates exchange by leading to standardization and automation. Standardizing products and services enables comparison and assessment, which in turn abet the production of the most highly valued items. By standardizing issues such as lot size, delivery frequency, payment, and communication, a routine is created to make the exchange relationship between buyers and sellers both effective and efficient. In channels where it has been possible to automate activities, the costs of such tasks as reordering can be minimized—an order is placed automatically when inventories reach a certain minimum level. In essence, automation involves machines or systems performing tasks previously performed by humans, thereby eliminating errors and reducing labor costs.

3. Intermediaries facilitate the **searching** processes of both producers and customers by structuring the information essential to both parties. Sellers are searching for buyers and buyers are searching for sellers; at the simplest level, intermediaries provide a place for these parties to find each other. Producers are not sure about customers' needs, and customers are not sure their needs can be satisfied. Intermediaries reduce this uncertainty for both parties.

We shall use these three functions to construct a grid called the *Internet Distribution Matrix*. With this matrix, we can pinpoint the effects of technology on changing distribution functions.

THE INTERNET AND THE WORLD WIDE WEB: WHAT DOES TECHNOLOGY DO?

Although their origins can be traced back many years, the Internet and its multimedia platform, the World Wide Web, have attracted considerable attention since 1995, particularly from marketers. Understandably, at this early stage the focus has been on the technology either from a general marketing perspective or as a marketing communication medium. Such attention is important and warranted, but too little attention has been given to the technology's impact on distribution channels, which may turn out to be even more significant than its impact on communication. Indeed, distribution may switch from channels to media in the future.

We discern three major effects that the technology loosely known as the Net and the Web will have on distribution. It will kill distance, homogenize time, and make location irrelevant.

The Death of Distance

In the mid-1960s, an Australian named Geoffrey Blainey wrote a classic study of the impact of geographic isolation on his homeland entitled *The Tyranny of Distance*. He argued that Australia and its neighbors would find it far more difficult to succeed in terms of international trade because of the vast physical distances between the country and the world markets. Recently, Frances Cairncross (1997) wrote a study on the convergence of three technologies—telephone, television, and computer—and chose to recast Blainey's title by calling her book *The Death of Distance*. She contends that "distance will no longer determine the cost of communicating electronically." For the distribution of many products—those that can be digitized, such as pictures, video, sound, and words—distance will thus have no effect on costs. The same is true for services. And for most products, distance will have substantially less effect on distribution costs.

The Homogenization of Time

In the physical market, time and season predominate trading and, by definition, distribution. We see evidence of this in the form of hours of operation—activities that occur by time of day and in social and climatic seasonality. The virtual marketplace is atemporal; a Web site is always open. The seller need not be awake to serve the buyer. Often, the buyer need not be awake, or even physically present, to be served by the seller. The Net and the Web are independent of season. In fact, they may even create seasonality, such as in the case of Thanksgiving Web browsers. Time can thus be homogenized—made uni-

formly consistent for all buyers and sellers. This is akin to what McKenna (1997) has called "real time": "our sense of ultracompressed time and foreshortened horizons.…[that] occurs when time and distance vanish, when action and response are simultaneous."

The Irrelevance of Location

Any screen-based activity can be operated anyplace on earth. The Internet bookstore Amazon.com (www.amazon.com), one of the most famous of the new Web-based firms, supplies books to customers located anywhere, from book suppliers located anywhere. The location of Amazon.com matters neither to the book buyers nor to the book publishers.

No longer will location be key to most business decisions. Indeed, one can dispute whether the term even has meaning in the case of firms such as Amazon.com, for defining location itself becomes onerous. Is it the address where the firm is officially registered? Is it where most of the people employed by the firm work? Or is it where the server is physically situated? None of these alternatives really answers the question; the very necessity for an answer itself is questioned.

Rayport and Sviokla (1994) characterize this phenomenon as a move from marketplace to "marketspace." They point out that to compare marketspace-based firms to their traditional marketplace alternatives, one needs to contrast three issues: *content* (what the buyer purchases); *context* (the circumstances in which the purchase occurs); and *infrastructure* (simply what the firm needs in order to do business). The best way to understand a firm like Amazon.com as a marketspace firm is simply to compare it to a conventional bookstore on the basis of these three criteria. Conventional bookstores sell books; Amazon.com sells information about books, with a vast selection and a delivery system. The interface in a conventional bookstore situation is in a shop with books on the shelves; in the case of Amazon.com, it is through a screen. Conventional bookstores require a building with shelves, people to serve, a convenient location, and most of all, a large stock of books; Amazon.com requires a fast, efficient server and a big database. Try as they might, conventional bookstores can never stock all the books in print; Amazon.com stocks no (or very few) books, yet paradoxically stocks them all. The location of a conventional bookstore matters a great deal—convenient spot, high traffic, pleasant surroundings; Amazon.com's location is immaterial.

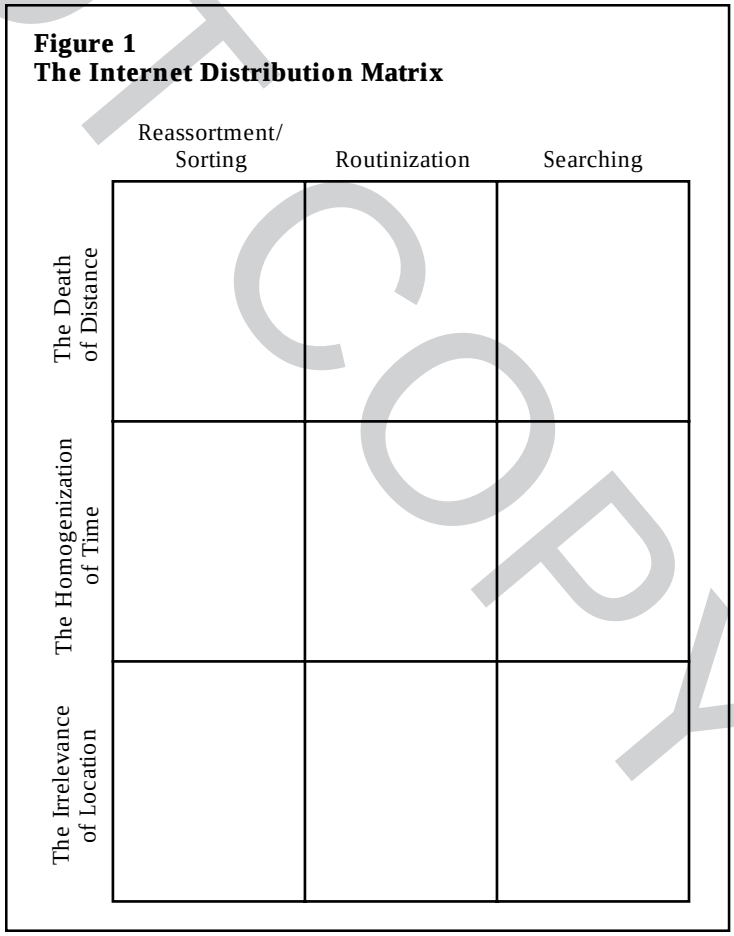
Technology is creating many "marketspace" firms. In doing so, cynics may observe, it is enacting three new rules of retailing: Location is irrelevant, irrelevant, irrelevant.

FILLING IN THE BLOCKS: THE EFFECTS OF TECHNOLOGICAL CHANGES ON THE FUNCTION OF DISTRIBUTION CHANNELS

Contrasting the three effects of technology vertically with the three basic functions of distribution channels horizontally permits the construction of a three-by-three grid, which we call the Internet Distribution Matrix (shown in **Figure 1**). We believe it can be a powerful tool for managers who wish to identify opportunities for using the Net and the Web to improve or change distribution strategy. It can also assist in identifying competitive threats by allowing managers to concentrate on areas where other actors might use technology to perform distribution functions more effectively. Often, competition may not be from acknowledged, existing competitors, but from upstarts and players in entirely different industries.

Each cell in the matrix permits the identification of an effect of technology on a distribution function. A manager can ask what effect the death of distance will have on the function of reassortment and sorting in a company, or what effect the irrelevance of location will have on the activity of searching.

Figure 1
The Internet Distribution Matrix



To stimulate thought in this regard, and to aid what Bandura (1977) calls "vicarious learning," we now offer several examples of organizations using their Web sites to exploit the effects of technology on distribution functions. We should point out that neither the technological effects nor the distribution functions are entirely discrete—that is, uniquely identifiable in and of themselves. In other words, it is not possible to say that a particular Web site is only about the death of distance and not about time homogenization, or location irrelevance. Nor is it possible to say that just because a Web site changes reassortment and sorting, it does not affect routinization and searching. Like most complex organizational phenomena, the forces all interact with each other in reality. So at best we have succeeded, we hope, in identifying cases that illustrate interesting best practices, or a good example, in each instance.

"The virtual catalog can be 'delivered' instantaneously, regardless of distance. Customers can obtain the latest product descriptions, specifications, and prices, and can even quiz the site on the best type of plastic or lubricant for the job."

The Death of Distance and Reassortment/Sorting

Music Maker (www.musicmaker.com) is a Web site that allows customers anywhere to create CDs of their own by sorting through vast lists of recordings by various artists of every genre. The Web site charges per song, then allows the customer to personalize the CD by designing, coloring, and labeling it. The company then presses the CD and delivers it to the customer. Rather than compile a collection of music for the average listener, as traditional recording companies do, or attempting to carry an acceptable inventory, like a good conventional record store, Music Maker lets customers do reassortment and sorting for themselves, regardless of how far away they may be from the firm. A customer who wants Beethoven's Fifth and Guns'n'Roses on the same CD can have them.

Distance is currently only a problem for delivery, not for reassortment/sorting. However, in the fairly near future, even distance will not be an impediment. As the costs of digital storage continue to plummet and baud rates increase, customers may simply download the performances they like, rather than have the CD delivered to them physically. They may then press their own CD, or just store the sound on their hard drives.

The Death of Distance and Routinization

A problem frequently encountered by business-to-business marketers with large product ranges is that of routinely updating their catalogs. A company must accurately reflect the availability of new products and features, modifications to existing products, and price changes. Once all these changes have been made, the catalog must be printed and physically delivered to customers who may be located quite far away, with all the inconvenience and cost such activity incurs. The problem is compounded by a need for frequent updates, product complexities, and the potentially large number of geographically dispersed customers.

Du Pont Lubricants (www.lubricants.dupont.com) markets many different lubricants for special applications to customers in many parts of the world. Its catalog has always been subject to change with regard to new products, new applications of existing products, changes to specifications, and price raises. GE Plastics (www.ge.com/plastics), a division of General Electric that offers a wide range of plastics with uses in many fields, has faced similar problems. But both companies now use virtual routinization by way of their Web sites to replace the physical routine of updating printed catalogs. The virtual catalog can be "delivered" instantaneously, regardless of distance. Customers can obtain the latest product descriptions, specifications, and prices, and can even quiz the site on the best type of plastic or lubricant for the job.

The Death of Distance and Searching

Anyone who has experienced being a traveler in Country A who wants to purchase an air ticket to travel from Country B to Country C knows the frustration of being at the mercy of travel agents and airlines, both at home and abroad. Prices of such tickets verge on extortion, and the customer is virtually powerless in trying to deal with parties in foreign countries, especially when unable to shop on the ground locally and obtain the best deal.

Now the German airline Lufthansa (www.lufthansa.com) has a global reservation system on its Web site that lets travelers book fares from anywhere in the world to and from anywhere in the world, preparing their tickets for pick-up at the airport. Unlike the Web sites of many airlines, which tend to be dedicated, Lufthansa's site allows customers to access the timetables, fares, and routes of its competitors. In this way, distance no longer presents an obstacle to customers in their search for need satisfaction, and Lufthansa is able to interact directly with customers all over the world.

The Homogenization of Time and Reassortment/Sorting

In a conventional setting, students who wish to complete a degree need to be in class to take the courses they want. The faculty who will teach the classes and the other students who will attend must also be there, all at the same time. When the time slots of two desired courses conflict, or the classes are taught one after the other at opposite ends of the campus, students generally cannot attend more than one at a time.

This problem is particularly prevalent in many MBA programs when it comes to elective courses, and students have to choose among appealing offerings in a way that generally results in satisficing rather than optimizing. Traditional distance learning programs have attempted to overcome these problems, but they have been only partly successful. Students miss the live interaction real-time classes provide.

The Global MBA (GEMBA) program at Duke University's Fuqua School of Business (www.fuqua.duke.edu) allows its students to take the elective course lectures, anywhere, anytime, over the Internet. Using this medium, a student can interact with faculty and fellow students. As the online brochure states, "Thanks to a unique format that combines multiple international program sites with advanced interactive technologies, GEMBA students can work and live anywhere in the world while participating in the program." Students enroll in the courses from many different parts of the world and in many time zones, yet can now self-assort the MBA program they really want.

The Homogenization of Time and Routinization

Every two months, British Airways mails personalized information to the millions of members of its Executive Club. But by the time the information arrives, it is out of date. A club member who wishes to redeem miles for free travel must either call the membership desk at the airline to determine the number of available miles, or request a travel agent to do so for him. There is also the problem of determining how far the member can travel on the miles available.

Nowadays, members can obtain online, up-to-the minute information on their status on the airline's Web site (www.british-airways.com). By entering their frequent flyer member number and a security code, they can get a report on the number of miles available to them and check on the latest transactions that have earned miles. They can also obtain a color map of the globe, with the preferred city of departure at the center and other cities to which they might fly on the available miles highlighted as well. They can also pose "what-if" questions to the site, determining, say, the cost and possibility of more passengers, or of upgrading the class of travel.

Thus, time is homogenized and transactions routinized because members can perform these activities when it suits them, without having to wait for a mailed report or for a travel agent's office to open. What was once a highly customized activity is reduced to a routine by a system.

The Homogenization of Time and Searching

In many markets, the need to reduce uncertainty by searching is compounded by the problem that buyer and seller operate in different time zones or at different hours of the day or week. Even simple activities such as routine communication between the parties are problematic. Employee recruitment presents a good example of these issues—companies search for employees and individuals search for jobs. Both parties often rely on recruitment agencies to enter the channel as intermediaries, not only to simplify the search processes but also to manage their time, such as setting up interviews convenient for both.

A number of enterprising sites for recruitment have been established on the Web. One of these, Monster Board (www.monster.com), lists around 50,000 jobs from more than 4,000 companies, including blue-chip employers rated among the best. Monster Board keeps potential employees informed by providing customized email updates for job seekers. Meanwhile, potential employers can access details and even résumés of suitable candidates online, at any time.

The recruitment market also provides excellent examples of "getting it wrong" and "getting it right" on the Web as a distribution medium. For many years, the Higher Education Supplement of the London *Times* has offered the greatest market for jobs in higher education in the United Kingdom and the British Commonwealth. Almost all senior positions and many lower-level jobs in universities and tertiary institutions are advertised. In 1996, the "Times Higher" set up a Web site (www.THES.co.uk) on which job seekers could conveniently browse and sort through all the available positions. This apparently affected sales, for within a short time the Web site began to require registration and subscription, probably in an attempt to shore up revenues affected by a decline in circulation.

"Students enroll in the courses from many different parts of the world and in many time zones, yet can now self-assort the MBA program they really want."

As Schwartz (1997) has pointed out, knowing what to charge for and how on the Web are issues with which most managers are still grappling. Web surfers, perhaps enamored of the fact that most Net content is free, seem unwilling to pay for it unless it produces real, tangible, immediate, and direct benefits. Universities in the U.K. may have begun to sense that their recruiting was less effective, or someone may have had a bright idea. At any rate, at the same time the Times Higher was attempting to charge surfers for access to its job pages, a consortium of universities set up a Web site (www.jobs.ac.uk) to which they all post available positions. Not only are job seekers able to specify and search by criteria, but once a potential position is found, they can link directly to the home page of the institution to obtain further information on such issues as the student body, research, facilities, and faculty.

Jobs.ac.uk does not need to be run at a profit, as does the Times Higher. The benefits to the institutions come in the form of reduced advertising costs and being on a site where job seekers will obviously come to look for positions. This is similar to the way shoppers reduce their search in the real world by shopping in malls that have more than one store of the type they intend to patronize.

In traditional markets, where search requires a physical presence, both buyer and seller need to interact at a mutually suitable time. Of course, this time is not necessarily suitable to the parties in a real sense, and is typically the result of a compromise. Those who wish to transport large quantities of goods by sea either need to wait until a shipper in another country opens the office before placing a telephone call, or communicate by facsimile and wait for an answer. But what if capacity could be ascertained and then reserved automatically? And what if a shipper had spare capacity it urgently wished to sell?

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SeaNet (www.seanet.co.uk) is a network serving the global maritime industry—24 hours a day, regardless of time zones—by facilitating the search for buyers and sellers. Reports indicate that this award-winning site was cash positive within a year, experiencing subscription renewals at a rate of 90 percent. Shippers can post their open positions, orders, and sale and purchase information onto the site. The information is updated almost instantly and can be accessed by any shipping company anywhere in the world searching the Net to do business—not just subscribers. Companies can then contact the seller by email or by more conventional methods. With the help of SeaNet's Maritime Sites, shippers can find the information they need quickly and easily.

The Irrelevance of Location and Reassortment/Sorting

Conventional computer stores attempt to serve the average customer by offering a range of standard products from computer manufacturers. Manufacturers rely on these intermediaries to tell them what the average customer requires, then produce an average product for this market. The customer travels to a nearby store to purchase the product. In this market, location matters; the store must be easily accessible to customers and large enough to carry a reasonable selection of goods, as well as provide access and parking.

Dell Computer (www.dell.com) is one of the real success stories of electronic commerce. Estimates of daily sales off its Web site need to be updated on a daily basis, but in February 1998 they were reckoned to be in excess of $4 million a day. The company has been a sterling performer through the latter half of the 1990s, and much of this achievement has been attributed to its trading over the Internet. Using Dell's Web site, users can customize their own computers by clicking on such attributes as processor speed, RAM size, hard drive, CD-ROM, and modem type and speed. A handy calculator instantly updates customers on the cost of what they are specifying, so they can adjust their budgets accordingly.

Once a customer is satisfied with the specified package, he can place an order and pay online. Only then does Dell commence work on the machine, which is delivered just over a week later. Dell only places orders for such items as Sony monitors or Seagate hard drives. The current rate of stock turn for Compaq, the PC industry leader, is 12 times per year; Dell's is 30. This may seem like merely attractive accounting performance until one realizes the tremendous strategic advantage it gives Dell: When Intel launches a new, faster processor, Compaq effectively has to sell six-week-old stock before it can launch machines with the new chip; Dell only has to sell ten days' worth. Once again, location is irrelevant to customers; the company is where they want it to be. Meanwhile, customers actually do some of Dell's work by getting to do the reassortment and sorting themselves.

The Irrelevance of Location and Routinization

Typically, location has been vital to the establishment of routines, efforts to standardize, and auto-

mation. It is easier and less costly for major buyers to set up purchasing procedures with suppliers who are nearby if not local, particularly when the purchasing process requires lengthy face-to-face negotiation over such issues as price, quality, and specification. Recent examples of major business-to-business purchasing off Web sites, however, tend to negate this conventional wisdom.

Caterpillar made its first attempt at serious online purchasing in June 1997, when it invited preapproved suppliers to bid on a $2.4 million order for hydraulic fittings—simple plastic parts that cost under a dollar but can bring a $2 million bulldozer to a standstill when they go wrong. Twenty-three suppliers elected to make bids in an online process on Caterpillar's Web site. The first bids came in high, but by lunchtime only nine were still left revising offers. By the time the session closed at the end of the day, the low bid was 22 cents. The previous low price paid on the component by Caterpillar was 30 cents. The company now attains an average savings of 6 percent through its Web site supplier bidding system.

GE was one of the first major companies to exploit the Web's potential in purchasing. In 1996, the company purchased $1 billion worth of goods from 1,400 suppliers over the Net. As a result, it reports that the bidding process has been cut from 21 days to 10, and the cost of goods has declined between 5 and 20 percent. Previously, GE had no foreign suppliers; now 15 percent of its suppliers are from outside North America. The company also encourages suppliers to put their Web pages on the GE site, which has been found effective in attracting other business.

The Irrelevance of Location and Searching

In the past, most buyers have patronized proximal suppliers because the costs of searching further afield generally outweigh the benefits of a possible lower price. This also creates opportunities for intermediaries to enter the channel. They serve local markets by searching for suppliers on their behalf, while at the same time serving producers by giving them access to more distant and disparate markets. Travel agents and insurance brokers are typical examples of this phenomenon; they search for suitable offerings for customers from a large range of potential suppliers, while finding customers for these suppliers that the latter would not have been able to reach directly in an economical fashion. As a result, the intermediary "owns" the customer and commands the power in the channel.

Some years ago, Blattberg and Deighton (1991) suggested presciently that interactive marketing would enable suppliers to win back power from the channel. By interacting directly with customers, suppliers would learn more about them. The British insurance company Eagle Star Insurance (www.eaglestardirect.co.uk) now allows customers to obtain quotes on auto insurance directly off its Web site. It offers a 15 percent discount on purchase and allows credit card payment. The company reports selling 200 policies per month in the first three months of this operation, generating £180,000 in premiums and making 40,000 quotations. Although one could argue that these numbers are minuscule compared to the broker market, it should be remembered that this type of distribution is still in its infancy. Customers may prefer dealing directly with the company, regardless of its or their location, thereby creating opportunities for the company to interact with them even further.

"The Net has the potential to go beyond passive distribution of products and services, to become an active (and central) creative element in the production of the product or service."

LONG-TERM EFFECTS OF THE IMPACT OF TECHNOLOGY ON DISTRIBUTION CHANNELS

The long-term effects of the death of distance, homogenization of time, and irrelevance of location on the evolution of distribution channels will be manifold and complex. However, three effects are already becoming apparent, and will undoubtedly affect distribution as we know it in profound ways.

First, in the future, we may talk of *distribution media* rather than distribution channels for most services and many products. A medium can variously be defined as:

- something, such as an intermediate course of action, that occupies a position or represents a condition midway between extremes;
- an agency by which something is accomplished, conveyed, or transferred; or
- a surrounding environment in which something functions and thrives.

The key distinction between a channel and a medium in this context concerns the notion of interactivity. Electronic media such as the Net are intrinsically interactive. Thus, whereas channels were typically conduits for products, the Net has the potential to go beyond passive distribution of products and services, to become an active (and central) creative element in the production of the product or service. It can create virtual markets (www.firefly.com, www.priceline.com), virtual communities (Firefly), or virtual worlds (www.thepalace.com). The medium is thus the central

element that allows consumers to co-create a market in the case of Priceline, their own service and product in Firefly, and their own virtual world in The Palace. Critically, in each instance the primary relationship is not between customers, but rather with the mediated environment with which they mutually interact. In the case of interactive electronic media like the Web, McLuhan's well-known adage "The medium is the message" can be complemented with the addendum that, in some cases, the medium is the product.

A second effect of these forces on channel functions may be a rise in *commoditization* as channels have a diminished effect on marketers' ability to differentiate the product or service. Commoditization can be seen as a process by which the complex and the difficult become so simple and easy that anyone can do them. It may be a natural outcome of competition and technological advances, with prices plunging and essential differences vanishing. Commoditization will be accelerated by the evolution of distribution media that will speed information flow and thus make markets more efficient. The only antidotes to it will be to identify a niche market too small to be attractive to others, innovation sufficiently rapid to stay ahead of the pack, or a monopoly. No one needs to be reminded that the last option is even more difficult to establish than the first two. However, as much as these forces impel commoditization, they are paradoxically permitting—indeed, driving—mass customization, which is the very antithesis of commoditization.

"In the case of interactive electronic media like the Web, McLuhan's well-known adage 'The medium is the message' can be complemented with the addendum that, in some cases, the medium is the product."

Dell lets customers build their own computers (albeit with commoditized components); Priceline allows customers to pay the price they want to pay (albeit for a commoditized air ticket); Yahoo (www.yahoo.com) gives customers the opportunity to create their own interface ("My Yahoo"). Though commoditization may present a gloomy picture, recent reports in the business press show a fortuitous flipside to the Web—the medium becomes the ultimate tool for mass customization, or personalization. As stated in *Business Week*, "If personalization takes hold, it could transform the way all retailers, both online and off, do business" ("Now It's Your Web" 1998).

Disintermediation and *reintermediation* comprise the third effect we discern. As networks connect everybody to everybody else, they increase the opportunities for shortcuts. So when a buyer can connect straight from the computer on his desk to the computer of an insurance company or an airline, insurance brokers and travel agents begin to seem slow, inconvenient, and overpriced. The marketing of products, as opposed to more intangible services, is also being driven by cheap, convenient, and increasingly universal distribution networks such as FedEx and UPS. No longer does a consumer have to wait for a retailer (who doesn't carry a good inventory of the latest products) to open, drive there, attempt to find a salesperson who is generally ill-informed, and then pay over the odds to purchase a product. Products and prices can be compared on the Web, and lots of information can be gleaned. If one supplier is out of stock or too expensive, there is no need to drive miles to a competitor; competitors abound, and all are equidistant—a mere mouse click away.

All of these opportunities will lead to disintermediation, whereby traditional intermediaries are squeezed out of channels. As networks become increasingly mass market, there is a continuous contest of disintermediation.

However, the Web also creates opportunities for reintermediation, whereby intermediaries may enter channels facilitated electronically. This could occur when an intermediary performs one of the three fundamental channel functions of reassortment/sorting, routinization, and searching more effectively than anyone else. Thus, new intermediaries are beginning to set up sites that facilitate simple price searches. Consider a site like Cheapflights (www.cheapflights.co.uk), which enables a customer to search for the least expensive flight on a route. Or a more advanced site like Priceline, which actually purchases the cheapest fare when a customer states what he is prepared to pay. In a world where new and unknown brands may face an uphill battle to establish themselves, there may be opportunities for sites set up as honest brokers, merely to validate brands and suppliers on Web sites.

Reintermediation could also occur for reasons other than the fulfillment of traditional channel functions. The online music site MP3 (www.mp3.com) was set up to give airtime to lesser-known artists and avail the music consumer of an outlet to listen to and acquire the output of exciting new talent. However, through its "Top 40 Downloads," it also acts indirectly as a venue, or "virtual agent," for large recording companies to identify and meet new talent. The site has proved so successful that established stars such as The Beastie Boys and Sheryl Crow have placed their own songs on it. In India, where levels of education and English literacy are high and labor is relatively inexpensive, companies have been established to serve as sites that act between customer and firm to

deal with online queries and "consumer flak." Customer email queries and complaints are received at a company's Web site, then redirected to a site in India, where they are dealt with tactfully, immediately, and seamlessly (the customer is not aware of the issue or complaint being dealt with in this manner). In such constant games of disintermediation and reintermediation, customer relationships will be the winner's prize.

The Internet Distribution Matrix can be used by existing firms and entrepreneurs to identify at least three things. First, how might the Internet and the World Wide Web offer opportunities to a company to perform its existing distribution functions of reassortment/sorting, routinization, and searching more efficiently and effectively? Cases of other organizations using the medium to perform these activities, such as those we have identified, can stimulate thinking. Second, the matrix can enable the identification of competitors poised to use the media to change distribution in the industry and the market. Finally, it may enable managers to brainstorm ways in which an industry can be vulnerable.

Neither a company nor its immediate competitors may be contemplating using the medium to achieve radical change. However, that does not mean a small startup is not doing so. And the problem with such small startups is that they do not operate in a visible way, or at the same time. In many cases, they might not even take an industry by storm. But they might very well deprive a market of its most valuable customers, as they exploit technology to change the basic functions of distribution. ❐

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