

# Disintermediation in Question: New Economy, New Networks, New Middlemen

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**T**raditionally, disintermediation has been defined as a development that enables households to bypass banks and place their savings directly with other types of financial institutions. In the context of the Web, it has come to signify the disappearance of a wide variety of “middlemen,” or intermediaries, and the creation of an enhanced sales network in which customers deal directly with service providers. The result is supposed to be a “frictionless capitalism” that reduces both inefficiencies and costs.

The first studies on e-commerce provided contradictory predictions about the impact it would have on intermediaries. Some suggested that the Internet would kill them off, while others concluded that their role would become more important than ever. Evans and Wurster (1997) pointed to a critical aspect of the e-business revolution: that the possibility of dissociating the physical flow of products and related information offers a wealth of new opportunities for reshuffling and reconfiguring the relationships among all the participants in the value chain—suppliers, distributors, retailers, customers. We contend that predictions of the imminent demise of intermediaries are premature, reflecting both a failure to analyze the variety and importance of intermediary functions and, more important, the lack of an overall strategic view assessing the costs of services intermediaries provide in the context of their perceived value to clients and customers.

Understanding the impact of e-commerce on intermediaries requires an analysis of how the tasks and functions of traditional economic actors are being reformulated and rebuilt. Electronic retailing, or e-tailing, has been a frontier for the development of e-commerce. By examining traditional functions provided by intermediaries in

sales transactions, we intend to demonstrate that current Internet trends go beyond disintermediation. Emerging new Internet players are being joined by entirely new types of intermediaries, leading to the radical restructuring of industrial and commercial networks.

## **THE INFORMATION ECONOMY: IMPACT ON CORPORATE STRATEGY**

**N**ew forms of commerce provided by the Internet represented less than 1 percent of overall retail sales in the United States in 1999. Nevertheless, millions are buying goods and services online from work or home daily, and millions more are communicating by means of these same open, universal electronic systems. This rise in electronic connectivity is arguably the most important driver of the Information Revolution.

Over the past few years, most companies have focused on adapting their operations in response to the new information technology (IT). But even though such changes have been widespread, corporate managers—and not just those in high-tech industries or telecommunication firms—must continue to redefine their strategies as the impact of e-commerce widens. For companies in virtually every industry, this means con-

*Far from sidelining distributors and other intermediaries, e-business is replacing them with new ones, sometimes even bolstering the number of network players.*

ducting an ongoing reevaluation of their position in the value chain.

### The Strategic Importance of the Information Value Chain

Information has become an ever more important component of a firm's value chain. The tremendous increase in information resources and connectivity available to businesses can provide major strategic advantages, which in turn contribute to the emergence of the novel intermediary functions illustrated later. These advantages include:

#### 1. Firms can better organize and control logistics while enhancing customer service.

In a highly competitive market, Federal Express has created a first-mover advantage, drawing on the value of information its market provides by adding a tracking system for clients. The company created a huge database, integrating some two million packages shipped daily. It also tracks clients, trucks, and planes and provides interactive features for clients. This integrated information and logistics system provides an important added value for the client and a key competitive differentiating element for FedEx. At the same time, the database allows for better control of services at each step of the process.

**2. Direct access to customers enables firms to adapt products and services more rapidly to demand.** Benetton, the global purveyor of fashionable knit clothing for teens and young adults, has built a top-rate real-time information system (IS) to handle physical and logistical relationships. The system has enabled the firm to maintain strong controls while forgoing

extensive store ownership or traditional franchise arrangements. Optical scanners in each store and a centralized IS at headquarters monitor young customers' buying trends. By collecting real-time data at the source, Benetton can retain the benefits of decentralization while patrolling the rapidly changing preferences of its famously fickle teenage customer base.

**3. Firms can create special long-term relationships with customers and establish more efficient retention programs.** The almost one-on-one perspective enabled by Net-based commerce offers many ways to strengthen customer retention. Amazon.com, the Internet bookseller, illustrates how firms can use information about customer preferences to develop a variety of programs that encourage customer loyalty and retention, thereby creating a new and potentially powerful form of connection between the retailer and customer.

**4. Firms can use the Net to obtain better control over their retail networks and more contact with end users.** General Motors is using the Net to increase its control over the semiautonomous dealer networks that have traditionally wielded considerable power at the retail level. By using its Web site to implement a more centralized strategy, GM is forging direct links to customers at the expense of the dealer's power. GM can choose the dealer closest in physical proximity to the Internet customer and have that dealer contact the customer via email or by telephone to consummate the sale. This system enables the company to:

- begin to optimize the "relationship" function with customers and create a database that helps develop other direct contacts with them, thereby building relationships and loyalty; and
- shift power from dealers to strengthen the overall retail network, directing business among dealerships to optimize network functioning.

### From Intermediaries to Cybermediaries

The move from traditional intermediaries to the new "cybermediaries" initially requires an approach that breaks down the sales transaction into its constituent elements and functions. When carried out either directly or via a third-party intermediary, four key functions make exchanges easier, cut the costs of carrying out the sales transaction, and improve responsiveness to customer needs. These four functions are:

**1. Aggregation.** The aggregated demand of buyers by a single intermediary, or the aggregation of several suppliers by a distributor, are alternatives to the situation in which each buyer must find a direct source of goods and each producer must sell products directly to individual customers. This aggregate function cuts transaction costs

**Figure 1**  
**Cybermediaries and Their Related Functions**

<i>Function</i>	<i>Site Characteristic</i>
Aggregation	<ul style="list-style-type: none"> <li>• Aggregating demand and wholesale price for household (MobShop, Mercata)</li> <li>• Aggregating supply and traditional online suppliers (Amazon, Buy.com)</li> </ul>
Trust	<ul style="list-style-type: none"> <li>• Institutionally backed brand or guarantee-based confidence (eTrust: "Building a Web you can believe in" refers to the companies that have subscribed to deontology respecting a person's private life)</li> <li>• Guaranteeing purchases (Amazon: "Hello! Shopping at Amazon.com is 100 percent secure—guaranteed!")</li> </ul>
Facilitation	<ul style="list-style-type: none"> <li>• Easy payment and logistics (Auto-by-Tel, E*Trade)</li> <li>• Clients fix price "levels" and unsold inventories (Priceline, Webhouse)</li> </ul>
Matching	<ul style="list-style-type: none"> <li>• Web portals and on-site selections (AOL, Yahoo!)</li> <li>• Auctions (e-bay, iBazar, S/R auction)</li> </ul>

and favors economies of scale, thereby reducing the asymmetry of negotiating clout between buyers and sellers.

**2. Trust.** Intermediaries can also provide a guarantee and protect buyers (or sellers) against opportunistic and/or manipulative actions. This function further lowers transaction costs—particularly important in the anonymous world of e-commerce, where mechanisms assuring confidence in the retailer, confidentiality, and security are not yet fully established. A related development is the growth of “reputation managers”—programs that can be external (a Web site dedicated to offering customer and expert opinion on sites, products, and services) or internal (book reviews and readers’ ratings on Amazon.com). These programs both replace and supplement the counsel and education provided by salespeople in traditional retail operations.

**3. Facilitation.** Transferring information to a decentralized market can be costly because each participant must seek out and exchange information with other economic players. A broker can speed up this process by becoming an intermediary, lowering coordination costs within the market. Intermediaries can also speed up exchanges by offering associated services, such as managing financial and administrative arrangements.

**4. Matching.** Intermediaries have several ways to find buyers for sellers and vice versa. They can be database administrators, focusing efforts on customer preferences and sending selective information about suppliers in a catalogue format. Or they can replace buyers and study alternatives and characteristics of competing offers. This is generally what supermarkets offer, allowing buyers to compare products and group them by category at the point of sale. In fact, intermediaries can create value, limiting customers’ research time and expense by offering a product line adapted to their needs. What is true for buyers also applies to sellers: Intermediaries can supply information on characteristics to help sellers find markets as well.

As shown in **Figure 1**, some electronic intermediaries have captured traditional functions, introducing new rules within the competitive play. As e-commerce continues to develop, we anticipate that these new intermediary functions will grow more important and sophisticated.

**EMERGENCE OF NEW INTERMEDIARIES: LESSONS FROM E-TAILING PIONEERS**

Intermediaries exist because they provide value-added services. As **Figure 2** shows, changes and upheavals sparked by the Net do not imply that intermediaries will disappear. Their rapidly evolving but still critical roles are evident in the most advanced sector of e-business:

e-tailing. The following three examples illustrate a number of trends in the “new” intermediation:

1. reorganizing networks by substitution;
2. disintermediation as the vector for creating new types of business; and
3. replacing the existing supply chain with novel forms of reintermediation.

**Reorganizing by Substitution: Amazon.com**

Since mid-1995, the cyber bookstore Amazon.com has been selling books directly via the Internet, substituting direct customer contact for transactions that previously involved, perhaps, “the bookstore around the corner.” It has gained a respectable percentage of U.S. book sales, capturing sales from both traditional bookstores and book superstores. Its key advantages lie in the broad range of books a customer can choose from and in competitive pricing. Moreover—and this is both the paradox and beauty of the company’s formula—Amazon.com can give its customers a highly personalized service and establish new relationships among readers.

The “reputation manager” functions embodied in the Amazon.com site provide substantial value to many of the firm’s customers, who have direct access to book critics of their choice and can communicate with a virtual community of like-minded readers. The firm can also suggest books that reflect customers’ current and past preferences. These value-added personalized services are clearly viewed by many customers as more than making up for the inconveniences of delay in physically possessing the purchase as well as having to pack up and ship any returns.

**Disintermediation and New Businesses: Dell**

Twelve years before the creation of Amazon.com, Dell set up a direct sales business in IT—first by telephone and catalogue via Dell Direct, then, as of July 1996, via its electronic site, Dell Online.

Founder Michael Dell’s original idea was simple: Sell computers directly, bypassing IT distributors. This disintermediation meant the company could avoid retail margins, make computers on demand, and lower the costs of stocking the finished product. Cutting the time

**Figure 2**  
**Restructured Networks and Intermediaries**

	<i>Maintaining Traditional Players</i>	<i>Spawning New Players</i>
<i>Same Network Organization</i>	<b>Traditional Intermediation</b>	<b>Substitution</b> (Ex: Amazon)
<i>Different Network Organization</i>	<b>Reintermediation</b> (Ex: Auto-by-Tel)	<b>Disintermediation</b> (Ex: Dell)

lapse between production and delivery to the end customer is an undeniable advantage in an area where prices for components change rapidly and innovation seems ever-present and exponential.

If this new configuration gives Dell a key cost advantage and greater flexibility in terms of its formula, other factors reinforce its capacity to compete. Dell's virtual integration combines the wise use of IT with the systematic subcontracting of low added-value elements of the business. This combination has enabled it to gain from the dual advantages of coordination among the links of the value chain and a level of flexibility that is on a par with a virtual company.

Initially inspired by Dell Direct's telephone system for order-taking, Dell Online offered a host of advantages over the original formula. The first was substantial savings on promotional expenses and servicing. A second was greater direct contact between the company and its markets and stronger client input in terms of overall service rendered. In reality, the company's electronic pages give clients the opportunity to configure their own system, set a price, benefit from price discounts, and diagnose—and fix—most breakdowns without Dell personnel. At its best, a well-organized online service can enable firms to move beyond traditional intermediaries and reduce reliance on the intermediation of a help desk or information center.

### Reintermediation: Auto-by-Tel

In general, the goal of a cybermediary is to step in at several points along the economic chain and integrate buyer/seller relationships. Some cybermediaries specialize and become Internet bro-

kers, allowing clients access to a broader information base and enhancing both selection processes and negotiating power. This is what Auto-by-Tel, a newcomer to the automobile market and another virtual economy star, has achieved.

Auto-by-Tel was founded in 1995 by Peter Ellis, who based his business around the simple concept that he could take advantage of the Net's interactivity to sell cars on the Web. In just four years, Ellis became a heavyweight in the vehicle distribution business. Since its inception, the company has helped more than two million online buyers find a car. With a staff of fewer than 200, the company currently grosses 1 percent of new car sales in America, and in 1999 corporate sales topped \$20 million.

Based on a network of 2,700 dealers, Auto-by-Tel matches buyers with the nearest car dealer that meets their criteria. When clients put in an order for a specific model, the request is sent to a server, which contacts all qualified dealers geographically close to the client. Within 48 hours a product proposal is sent to the client. The network is composed of certified car dealers ready to sell cars at the price listed on the Web site, and the business generates sales of millions of dollars per month.

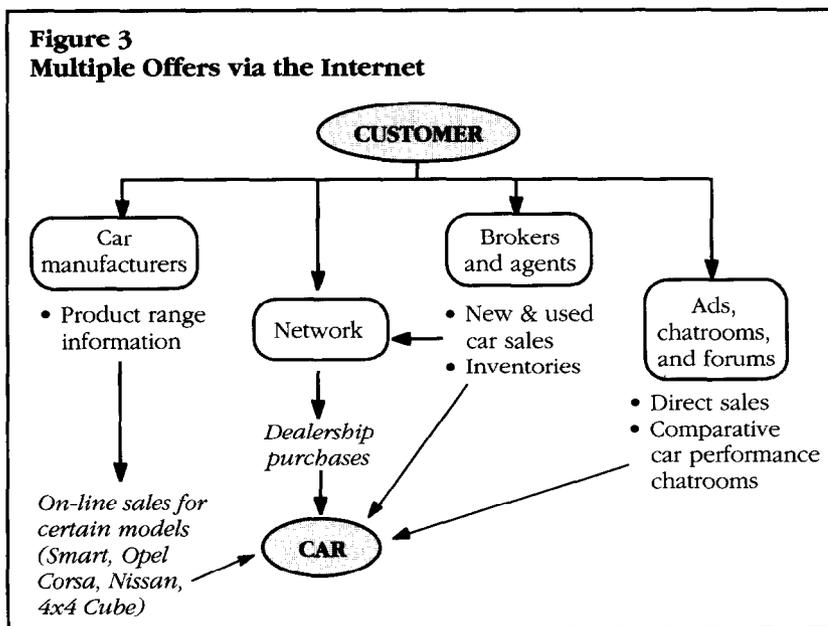
Auto-by-Tel updates its database continually and has a staff of 35 "techno-wizards" working on site maintenance alone. The service it provides is free for clients and has the advantage of being cheaper than traditional advertising. Car dealers who want to be an Auto-by-Tel franchisee pay an entrance fee as well as a monthly fee.

As shown in **Figure 3**, a number of newcomers offer customers various alternatives. Although for the time being these approaches are largely a substitute for existing networks, the new channels are upsetting the existing balance in automobile distribution. It is important to note that where Amazon.com "takes the place of" or "substitutes for" the bookstore around the corner, and Dell eliminates the middle man, Auto-by-Tel adds itself into the system, thereby changing the way added value is delivered to the customer.

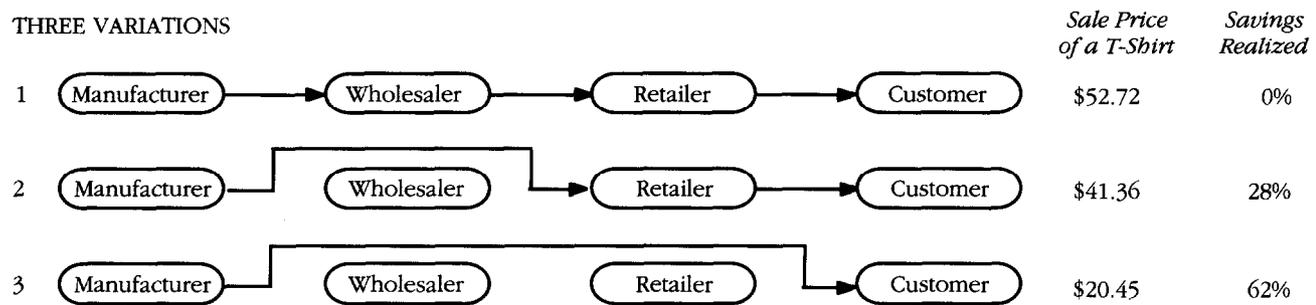
### From Internet to Logistics

As shown in **Figure 4**, it is currently much easier and cheaper for a buyer to go online and order directly from a manufacturer. Electronic markets often mean lower transaction costs, and distribution coordination will quite naturally bypass intermediaries that no longer have a defined economic function in the supply chain.

In addition to information (the key product part) and financial flows (the transaction's value), which can often be handled without intermediation, physical and tangible product parts need to be shipped and delivered to the end customer via



**Figure 4**  
**The Textile Industry Value Chain**



Breakdown by intermediary of the added value and the higher sales price:

	<i>Manufacturer</i>	<i>Wholesaler</i>	<i>Retailer</i>	<i>Customer</i>
Added value	\$20.45	\$11.36	\$20.91	---
Sales price	\$20.45	\$31.81	\$52.72	\$52.72

Source: Thornton (1994)

traditional logistics (except for intangible products and services, of course, such as buying and selling shares or downloading music). So “complete disintermediation” is usually not physically feasible. To paraphrase Evans and Wurster, it is not the fact that the object’s materiality can be abstracted that explains the current IT revolution we are experiencing. Rather, it is the possibility of dissociating the physical flow of products and related information.

Distinguishing the physical from the informational part of the supply chain spawns new intermediaries that quite naturally find their legitimacy in the current shifting environment and provide more added value. These elements extend beyond the Net’s formal framework and generally apply to all the ITs companies use.

A French radio-taxi company, Taxis Bleus, took advantage of a gap between supply (the fleet of available taxis) and demand (companies or private individuals) by organizing an IS between the two parties. Using its satellite-driven Global Positioning System (GPS) and a telephone switchboard, the firm can reduce customer waiting time, precisely identify both driver and passengers, and “personalize” relationships. This guarantees better service quality, minimizes unexpected incidents, cuts pick-up time, and, eventually, optimizes the taxi’s route. As an information broker, Taxis Bleus enhances both driver logistics and the driver-passenger relationship. Via its GPS, the risk of losing a customer is reduced and the client gains a better relationship.

As we have seen, companies like Dell and Amazon.com rely on express delivery services to build up their services. And the necessity for a logistics base is part of the virtual value chain.

The need to deliver products to end clients and provide service elements requires proximity or direct contact (car servicing, babysitting, checking in luggage, and so on).

ITs will effectively allow for less cost and fewer errors as well as optimize the management of late delivery. But contrary to the visions put forth by some, they will not lead to the full abstraction of time and space—which is why, in addition to the current information “wars,” a “hidden war” focused on freight and logistics is being waged.

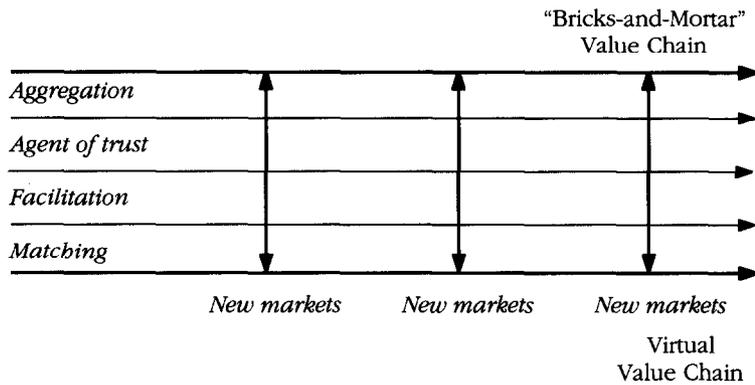
The nature of organizing logistics and the current competition being stepped up in a number of sectors can—and probably will—change. But what is more interesting is that operators themselves can and will have access to the Net to find distinct competitive advantages. Within the corporate physical value chain, the new logistics intermediaries must now be able to identify and pinpoint requested products and deliver them with lightning speed. Distributors will have to ensure a near-zero fault rate in terms of punctuality, guarantees, security, and service.

### Virtual Intermediaries

Free access to information on the Web could push customers to make their own choices and bypass intermediaries. But such arbitration is not merely price-based. Other factors must also be accounted for and weighted accordingly, such as time required to find the information, comparative shopping, perceived transaction risk, and so on.

As shown in **Figure 5**, each of the four previously identified traditional functions can create new intermediation businesses for the materials

**Figure 5**  
**Operating the Value Chain and Creating New Activities**



Source: Rayport and Sviokla (1995)

and logistics of the value chain and, as we have seen, supply more via its virtual and informational facets. Each time an economic player loses one of these functions to another operator, it runs the danger of seeing its negotiation clout and function in the network wane. By offering most services over the Net, some travel agencies could very well lose a key part of their added value and thus a hefty part of the unique expertise they offer customers.

The generic idea of disintermediation to which e-commerce specialists often refer does not necessarily mean "ending distribution." Rather, it means discovering "new distribution modes." In a fluid or immaterial economy, intermediation has become even more strategic today than in the past, principally because of its virtual and informational aspects.

For new online bookstores to remain viable, entrants may need to be referenced on general public portals that require an entry fee and sales commission. Far from systematically putting distributors aside, electronic configuration often replaces the historical intermediaries (market substitution in the book industry) or even bolsters the number of new players in a specific network (reintermediation in the car market).

A fundamental postulate about the disappearance of intermediaries is based on users being intelligent and expert enough to use and vet the Net—and having the time to do so. According to some, the distributor's role in terms of advising, warning, or reassuring—of providing aggregation, trust, facilitation, and matching functions—could be replaced by an electronic contact: quick for certain, but relatively impersonal and virtual. This ideal vision of a simple, open, and transparent market, however, often turns out to be questionable when tested in real life. □

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