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WEB CHANNELS IN E-COMMERCE

*Maximizing the
channel potential increases
the business value of a
firm's Web site.*

The Web is fast emerging as a major player in the relationships between producers and consumers. These relationships can be described in terms of channels, or the paths that products or services take as they move from source to destination. Channels can be of different types, ranging from advertising channels, order processing channels, to customer support channels. The Web is currently being used as a medium for these types of channels in the supply chain. In this article, we use activity theory to suggest a framework that can be used to enhance the business value of a firm's Web site by maximizing its channel potential. The article also uses phenomenological insights to understand the nature of experiences needed for successful channels in the context of a virtual community.

A popular commercial use of the Web is for business advertising. When companies set up their Web sites, their first goal is usually to advertise the products and services they offer. Applications of this kind are called "shop-front" applications. Most Web sites evolve from shop-front sites to providing some elements of interactivity. Customers can review products, send comments to the Web master, leave behind some demographic information, customize their user profiles, and so forth. Web applications have historically progressed from this

simple interactive level to becoming full-fledged ordering systems. Activities such as customer support, customer services and after-sales support are primarily information-based and, therefore, the Web can play a significant role. For a business intending to serve its customers, the Web can replace expensive 800-number help lines and paper-based documents with interactive services and easily updateable online information. The investment in hosting such services can save money and please customers at the same time [5].

The Web is ideally suited for information-rich products such as news, books, music, and software (Figure 1). Information about such products will attract interested Web users. In addition, the fact that many of these products are digital allows for easy upgrades and updates and provides the capability to capture consumer information over longer periods of time. For products such as soaps, soft drinks, and grocery items there are few interesting informational aspects that can attract a large number of surfers. Producers of these products have traditionally had large

Figure 1. Dimensions of product characteristics.

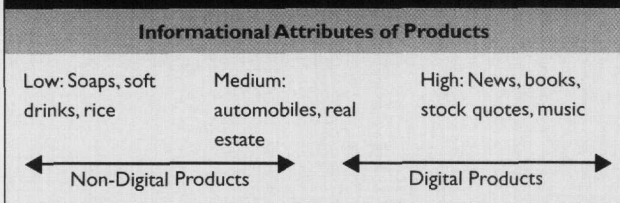
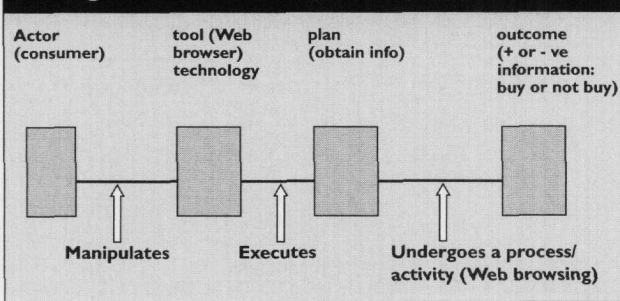


Figure 2. The activity theory framework.



advertising budgets in the hope of producing an emotional aura about such products, which in turn leads the consumers to their wares.

However, the Web has a long way to go before it can be called an unqualified success. Most of the dot-com companies make more losses than profits, even though their stock market evaluations have been quite high at times. While the concept of information richness of the attributes of products (Figure 1) can be used as a framework for initiating Web development activities, it is not sufficient to develop a set of principles for Web developers to overcome the drawbacks. In this article we utilize activity theory to understand consumer experiences on the Web in order to develop possible prescriptions for successful Web development [7].

Activity theory (Figure 2) describes human activity in terms of an actor, a tool, an object or plan, a process, and an outcome. In this scenario, the tool is the Web browser. The object is the plan for obtaining information, the process or activity is surfing and the outcome is positive or negative, to buy or not to buy, for instance.

The focus in the theory is on an actor that is an active agent in the process of making choices, proficient in the use of a tool and engaged in an activity. Unlike the television viewer, the actor is in control. The producer must do all that is possible to help the actor achieve a positive outcome. If the actor is looking for information, the producer's site should provide the same. If the actor is looking for a good "deal," the site should assist in that. Similarly, if the goal is to enjoy a social experience, the producer must create an environment in which social relationships can thrive. The producer has to decide on what goals (of the actor) to focus on and how to help in achieving those goals.

The Web as an Advertising Channel

The primary challenge in the use of the Web as an advertising channel is to attract Web users to a firm's site and expose them to the firm's advertising. As a shop-front application, the Web competes with other advertisement channels such as newspapers, radio, television, junk mail, and so forth. There are currently two business models being tried out on the Web:

- Using the Web as a channel to advertise a firm's own products and services. The underlying hope is that traffic at the firm's site is exposed to an advertising message leading to greater brand awareness. Most companies develop their Web sites with this model in mind.
- Making a firm's site a portal site and using captive audiences for advertising other firms' products. This is the approach used by sites such as Yahoo.com, Infoseek, and others.

The experience of companies using these models so far has been generally disappointing—companies such as Bell Atlantic, Coca-Cola, and P&G have all found the Web disappointing as a channel [3]. The Web as a channel for advertising suffers from several drawbacks. First, only small banners can be shown. This compares unfavorably to the kind of impact that is possible through a television or through a full-page advertisement in a newspaper. Second, the surfer is "out-of-control," just a mouse click away from your site. There is no captive audience as is the case of television or newspaper. Third, the cost per thousand (millennium) (CPM) exposure values used by advertisers to evaluate the effectiveness of a medium are not well established for the web. This prevents advertisers from investing in this medium. However there have been a few success stories as well. Witness a successful Web site such as Saturn.com for the Saturn automobile. Instead of

focusing only on their product and the specification, the site features a lease-price calculator, an interactive design shop for choosing options, and an online order form. The site for Ragu sauce (also known as Mama's Cucina) is very aptly named www.eat.com and has garnered numerous awards. In addition to basic advertising information about sauces, Ragu focuses on providing a "relationship" with the consumer through its interactive Web site that includes: free coupons, market research surveys, online contests, recipes galore, a virtual guide to little Italy, fun for kids as well as Mama's guide to romance. The fundamental goal of the Web site is to create consumer loyalty.

From an Activity theory point of view, the Web enjoys several advantages over a passive medium such as a television. First, the Web is interactive in nature and so gets the individual more involved with the media. A common experience related by Web surfers is that they feel they are "in control" [6]. (This is in contrast to other interactive experiences such as reading a catalog and placing an order using an 800-number.) The power of the Web comes from its almost instantaneous nature. The technological context in which it happens attracts high earning individuals who are comfortable with the technology. Second, the Web is a much more focused medium in contrast to television or newspaper. The experience on the Web can be tailored to each surfer. The Web can be converted to a micro-marketing tool, with advertising designed for each consumer. The challenge, of course, is to capture the buying habits of the customer. This is often done by bribing the surfer to part with personal details in exchange for free goodies and by collecting live statistics about their actual purchases. Examples are sites such as Amazon.com and products such as FireFly that use previous music purchases to predict the CDs a consumer is likely to enjoy. Third, the Web is a participatory tool. Many people can communicate with each other in the context of an online community. Producers of products with low information content can promote such community-based sites focusing on a related social goal. For instance, pharmaceutical companies can help in setting up online breast-cancer groups or diabetes societies, and P&G could set up sites related to children's hygiene and care. These societies can bring along experts and novice users (potential buyers), to interact about relevant issues.

The challenge in Web-based advertising is to make the power of focus, interactivity, and participation come into play. Possibilities on the Web along these three dimensions are still being explored and

developed, some of which include: listening to a snippet of a music before buying, browsing a book, virtually visiting a house and its neighborhood before actually visiting the house, configuring a PC at producer's Web site before ordering (Dell.com), or tracking the progress of overnight mail or package (Fedex.com). In fact Web-based promotions such as coupons, volume incentives, membership programs, and contests will be increasingly important.

The Web as an Ordering Channel

The next step in the supply chain after advertising is ordering. The Web still has a long way to go before it becomes a full-fledged ordering channel. A study of consumer behavior regarding online food purchasing found that less than 5% of the purchases of any food and only 0.7 % of potato chips, are made over the Web [12]. According to GVU's 10th Web Survey (www.cc.gatech.edu/gvu/user_surveys/), conducted in October 1998, in response to the question: "On average, how often do you make online purchases?" A total of 82.5% of 645 respondents said they make one or less than one purchase a month. This shows that the popularity of online ordering is not as strong as it could be, especially if we consider that the respondents to the survey actively utilize the Web and 67.4% of these have at some time in their life used the Web for online ordering.

Several examples of interesting Web-based ordering initiatives surfaced in the late 1990s, though most of these firms do not expect Web ordering to take over substantially from the physical storefront. Estee Lauder, a cosmetics company has set up a site—Clinique.com—an online gift-referral and ordering program. This allows users to register for Clinique products and email gift requests to gift-givers, who can in turn order without ever setting foot in a store. Even in commodity businesses that make low-tech products such as sweatshirts (for example, Fruit of the Loom), electronic ordering of products has recently begun. Levi's Dockers brand is selling khakis online through dockers.com. GM has unveiled a program GM Buy Power (gmbuypower.com) permitting prospective buyers to order a car electronically—although it's important to note that the orders come out of dealer, not manufacturer, inventory. The goal is not to eliminate or supplement the dealer, since tire-kicking is an essential part of the car-buying experience that cannot be duplicated online [11]. Such examples underscore that the critical aspects of most marketers' businesses will continue to be through physical storefronts. Yet, as more and more manufacturers begin to experiment

Figure 3. Four types of book buying experiences.

More	Antique bookstores	Large bookstores with coffee shops and play areas
Experience along time	Magazine stalls	University bookstores
Less	Less	More
	Experience along space	

with virtual storefronts, a concurrent increase in direct online sales seems inevitable.

Apart from the security and trust issues that are important for the ordering process (not discussed in this article), the nature of the ordering process and the different kinds of experiences in time and space as experienced by the consumer is also important. Activity theory allows a better understanding of the experiences involved in ordering. Ordering on the Web is clearly dependent on the interactivity and focus of a channel as discussed in the previous section. A buyer manipulates a tool (an automobile or a phone or mail or a Web browser) to visit a site (an actual store or a virtual store) with a purchase plan (gather information, make comparisons) and undergoes an activity or process resulting in some outcome (an order or no order). Two important elements affect the activity element, in particular its time and space aspects. All human activity takes place in a some locale and extends over a certain time period [8]. The ordering experience can be categorized in terms of how time and space interact. Sometimes, a consumer is in a hurry and wishes to locate a particular product and leave the store immediately. At other times, consumers wish to browse, feel and handle a wide variety of items before deciding on a purchase. There are spaces where consumers feel welcome and like to linger and there are spaces from which they desire to quickly exit.

A close examination of the kinds of experiences consumers have in buying books and magazines reveals the two dimensions of time and space and a simple typology of four types of experiences as shown in Figure 3. In the context of a bookstore, the notion of space is often related to the choice of books. When more books are carried it usually implies greater floor space. The four types of purchasing experiences shown in Figure 3 include:

- “Less time and more space.” The typical university bookstore is an example of less time and more space kind of experience. The layout of such a store does not encourage buyers to loiter

in the aisles. There is usually no place to sit. Most buyers do not wish to browse, and students usually do not have a choice as to what books to buy.

- “More time and less space.” An antique bookstore usually provides the opposite focus. Given a more limited choice, readers are expected to browse and read before they buy.
- “More time and more space.” On the other hand, a large bookstore or a book mall such as Barnes and Noble or Borders emphasizes both in our ordering experience. The layout has a place for coffee, a place where mothers can read to their children, and sofas where readers can sit comfortably and browse.
- “Less time and less space.” The magazine stalls at airports allow limited choices in selection and buyers are expected to make their purchases quickly and move on.

Each of these four types of book buying experiences has a Web equivalent. If a consumer visits the Web site of Barnes and Noble, finds details of many books, is able to read their reviews and then decides to order, the experience is similar to visiting a book mall. On the other hand, if the consumer selects a book and uses a single-click order as allowed by Amazon.com, the consumer is having an experience similar to visiting a collegiate bookstore. The Amazon site carries information relating to two million books and still allows consumers to enter the site, make a selection, order and exit, all within a minute. On the other hand, a news subscription at home.MSN.com, offers just the news headlines on opening page, as if it were a magazine rack to glance at and move on.

A successful Web site should allow all of these four types of experiences. Different visitors at different times will choose the ordering experience they desire. Not only must the site offer a large choice, which is the equivalent of space, it should also permit repeat visitors to have a single-click ordering option. The possibility of the four types of experience is only made possible by interactivity that the Web allows and focus that makes customization such as single-click ordering possible.

Web as a Customer Support Channel

Customer support is the final link in the chain between the producer and the consumer. It adds value to products and services and is an integral part of successful business. Several industry studies have been carried out on the differences between telephone support and electronic support. Over 90% of software companies surveyed report they offer Web-

based and email services, however, only 30% of their customers' report using these services. Often customers do not understand how much easier it would be for them to use the electronic services. The reason is that many Web-based service offerings do not meet their strategic or tactical objectives. A surprising finding is that several companies have long response times (on the order of days!) to respond to electronic service requests such as email. Why would a customer use an electronic method when it takes so much longer? [4]

A recent interesting development has been that of companies hosting virtual communities [1] to assist their customers. A successful example is that of Cisco, which is reportedly saving over one-half billion dollars a year by providing customer assistance over the Web. It encourages its users to interact over their Web site and meet each other needs (www.cisco.com). The use of Web-based arrangements to allow customers to support each other is not only a good public relations move, but also takes a considerable load off the company's support staff. By providing users and developers' communities with information and contacts, it builds loyalty for its brand name while promoting collaboration among its customers.

Two Web sites are good demonstrations of the virtual community model. GeoCities and Tripod claimed membership of over one million users each. Both sites allowed members to set up their own Web pages and their own virtual communities. Their Web sites supplied the tools necessary for such virtual communities to run. Similar popular Web sites are run by companies to exploit the concept of the virtual community, for example, Diabetes.com, which is funded by Sun Microsystems and Bayer Pharmaceuticals and helps to gain good public relations exposure.

Setting up a popular virtual community involves several formidable tasks. The challenge is to develop a meaningful community, composed of relationships, that engenders not only personal involvement but also loyalty to the hosting company and its products. Done successfully, the benefit of a virtual community of users to the company is several times the costs of hosting the Web site. How can a firm develop a virtual community to support itself and its products? Phenomenology, which has a rich tradition of analyzing human experience, along with activity theory, can provide some insights [9]. Clearly the experience that the actor has to go through, the tools and technology that he or she must use, the plans that have to be executed, the goals that have to be achieved, and the social experi-

ences will determine the success of the virtual community.

Social experiences are differentiated according to immediacy of interaction in [8] in the following ways: (a) The world of "you," where individuals interact face-to-face and the whole being gets involved in a direct and spontaneous way. It is difficult to converse with someone while simultaneously engaged in some other task. (b) The world of "them," where no such spontaneity is experienced and one is free to devote as little or as much of oneself in the asynchronous interaction process. Interaction with others can also be described in terms of "thou" (the world of relationship) and "it" (the world of purposeful orientation) [2]. The "thou" relationship is one where individuals have a face-to-face and emotionally fully engaged interaction. The relationship to "it" is in the nature of relating to a concrete object for meeting one's own goals and is associated with goal-driven behavior such as desiring more information and resolving problems. The online communities has been subdivided into "relationship-focused" and "task-focused" communities in [10], which are described as follows. In relationship-focused groups, members are more intimately involved with one-to-one and face-to-face interaction. Members have strong identification and emotional attachment to each other. Task-focused groups are much more impersonal and formally organized.

Based on the preceding phenomenological literature, virtual communities may be segmented into three types: those based on "You," "They," and "It." In the "You"-based community, members engage in one-to-one conversation, have strong attachment to each other, relationship is their primary focus, and are likely to engage in synchronous message exchange. Along the continuum of relationship-based and task-based, these communities are at the extreme end of the relationship-based category. Web sites for dating such as Cupidtouch.com are good examples of this type. The site encourages individuals to engage others on a one-to-one basis and provides access to personal chat rooms, delivery of virtual post cards, and exchange of email. Members themselves generate much of the content exchanged between participants and the conversation can best proceed in an atmosphere marked by autonomy and confidentiality. The "They"-based virtual community fulfills humans' needs for tertiary social groups such as clubs and neighborhoods. The goal is to engage with several members in a community—members have fun exchanging opinions, jokes, and so forth. The interaction nature is that of many con-

Table 1. Three types of virtual communities.

Types of virtual communities			
	"You"	"They"	"It"
Motive	Relationship	Shared interests	Information
Interaction	One-to-one	Many-to-many	One-to-many
Web Content	Member-generated documents and messages	Discussion groups and member-supplied contents	Host-supplied documents
Autonomy	Member-driven	Moderated discussion groups	Host-driven
Tools	Email, telephone, chat sessions, virtual postcards, virtual greeting cards	Bulletin boards, threaded discussion, forums	Web display of documents and multimedia contents

versing with many. Shared interests are also the focus of these groupings. Conversational systems, rather than one-to-one chat rooms, serve needs better. Much of the interaction can be asynchronous, and threaded discussions allow for members to track responses from several people. It also allows members to join or leave the discussion at various stages. Since, large groups are involved in the discussion, it needs to be controlled and moderated. The host has to clearly enunciate the rules of conversation and ensure their compliance. The famous WELL community, the GeoCities and the Tripod sites are good examples of "They"-based community.

The third type of community is the "It"-based community. In such a community, members log in to receive information from the host. Their primary interest is get information or advice that serves their goal. Even if they engage in conversation with other members, they are primarily task driven. The host generates almost all the Web content. The nature of interaction is one-to-many with the host communicating with the members. The sense of a community is weak. It is similar to mass media generated communities such as the community interested in a popular TV series or a sports event such as the Superbowl. Most company Web sites are inadvertently of this type.

Table 1 summarizes the features of the three types of virtual communities. It provides their distinctive features and the tools that are necessary to develop such virtual communities.

Conclusion

A major trend in channel management is the recent emergence of electronic commerce. Electronic commerce appears to be an entirely new channel, not just a new mechanism for ordering, advertising or customer support and requires different strategies than traditional ones. The experience on the Web is

often holistic in nature. A good experience on the Web site leads to brand awareness and increase in consumer loyalty. Companies can possibly improve the business value of their Web sites by incorporating the principles discussed in this article.

The virtual community is an important metaphor that may help in the establishment of a successful Web site. Web sites must be so designed so as to enhance interactivity, and allow for more customization. This will lead to maximization of involvement. The dimensions of space and time should be emphasized. Web site designers should allow for a wide variation of experience in the two dimensions. Ultimate winners will be companies that move away from using Web as a broadcast medium toward a one-to-one, interactive and a participative medium for interaction. If the mantra in real estate is *location, location, location*, the mantra on the Web is *involvement, involvement and involvement*. ■

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