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# A PARADOXICALLY PEACEFUL COEXISTENCE BETWEEN COMMERCE AND ECOMMERCE

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#### ABSTRACT

Common opinion on the street is that 1) ecommerce cannot coexist with traditional commerce, and that 2) ecommerce can't work given the economics of business. Neither is true. ... Just as parts of our world can be described in Newtonian physics and others parts in quantum mechanics, so too can both ecommerce and traditional commerce coexist. This paper discusses the paradigm shift that allows ecommerce to pursue a profitable and sustainable model. Three paradoxes are used to explain how ecommerce and traditional commerce can coexist.

#### INTRODUCTION

Commerce is no longer the darling infant that mesmerizes us just by the miracle of his being. We have witnessed its birth and have seen its sometimes-painful encounters with the older generation of traditional commerce. Now that we have been besieged to the point of oversaturation with "baby pictures" presented by the delighted new parents of dot coms, it is time to allow the awkward adolescent known as ecommerce to take time out, with his parents, to mature well out of the spotlight. Thankfully, many of the lights and cameras of public interest formerly trained on this child

have been dimmed, and businesses are now being permitted to develop in some remarkable ways out of publicity's harsh gaze. (It is only fair to note that the *enfant terrible* of ecommerce was often quite happy creating its own cloud of overexcited hyperbole, so that the media are not solely to blame for the swirl of publicity surrounding dot coms.)

### ECOMMERCE IS AN EMERGING TECHNOLOGY

Technology is defined as "The application of science, especially to industrial

or commercial objectives." We have come to use the word technology in a fuller sense—that technology is something that supports us in achieving various objectives. Some researchers have even classified technologies by focus (Dart et al., 1987) task orientation (Chen, Nunamaker, and Weber, 1989), and function (Henderson and Cooprider, 1990 and Lyytinen and Kendall, 1992). In these studies technology included software, models, and systems to support production, communication, and commerce.

We propose that the reader should view ecommerce as a technology, one that is now in the phase referred to as technological emergence. Kendall (1999) establishes a framework for assessing emerging technologies. Five phases for technological advancement are identified: technological invention or discovery; technological technological acceptance; emergence; technological sublime; and technological surplus.

In the first phase the technology is merely invented, but in the technological emergence phase managers learn how to employ technology to its fullest. In the process, managers are educated and also train others in the use of technology. Additionally, managers learn about planning for technology, and how to avoid unique organizational problems created by the newly adopted technology.

In the third phase, the general public accepts the technology. Then in the fourth phase, the technological sublime, the beneficial aspects of technology are fully recognized and appreciated. In the final stage, the technology is overused.

Ecommerce is still emerging. If you accept it as a technology, you can compare it

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to other technologies developed throughout history. It is still possible and practical to research the development of a technology while it is in its emergence phase. And it is possible for researchers and executives to better understand and influence its adoption.

# COMPETING TECHNOLOGIES COEXIST

During technological emergence and through most of the technological acceptance phases, technologies may grow, but they do obliterate necessarily an existing technology. In fact, there are countless examples of inventions that seem far superior technically to their predecessors, but have taken a long time to dominate their field. Gunpowder, for example, was invented in China around 270 A.D., then first used as a weapon in the siege of Kaifeng, China in 1126, but it coexisted with bayonets well into the 19th century.

A modern example is the introduction of television. On June 13, 1948, The New York Times printed an extensive supplement on the future of television (invented more than two decades earlier). The television network at that time extended East to Boston; West to St. Louis; North to Buffalo, and South to Richmond, Virginia. The extension of the network to California was "contemplated." supplement was packed claims, predictions, extraordinary and editorials about the future of television including uses for the military, two-way television; "portable video," "subscription video," and even color. Advertisements exclaimed that you could even own a 52 inch screen. (Screens were measured in square inches then, so a 52 square inch screen would be approximately a 10.5 inch screen today.)

But the remarkable part of this supplement is not the hype that is so familiar to us now, but that it was so apparent throughout the supplement that other forms of communication would endure as well. A full page on a new system for the radio, called frequency modulation or "FM" boasted reception free from static. And the print media, embodied in the editorial voice of *The Times*, was clearly confident in its capability to

communicate more detailed content than the upstart television would be able to deliver for some time in the future. As momentous as television was, it did not instantly replace other forms of communication.

Ecommerce is making an impact. Some claim that this is a critical paradigm shift in the way of doing business. Still others argue that ecommerce was a thrilling experiment that failed. We think it will coexist.

# ECOMMERCE AND NEW BUSINESS MODELS

Internet business models is a term that can be used to describe entirely virtual ecommerce sites or it can be used to characterize those Web sites that enhance or support traditional businesses through their Web presences. Businesses that are entirely Web-based, are also known as "pure players." They were enabled with the advent of the Web and ecommerce software, and as such they do physical counterparts. ecommerce business models are elaborations of traditional businesses that add value for the consumer (whether it is a business or an individual) through the addition of new products or services: or additional information coupled with a service or product; or a significant lowering of the cost of a service or product through use of the Web as a transaction medium.

Although new Internet business models may develop, there are some that seem to have come into common use over the last few years. These include: virtual storefronts; content providers; auctions and reverse auctions; online service providers; information brokers; transaction brokers; and digital delivery services.

Many of the original business models that were tried initially on the Web, and that subsequently failed, were not bad models. They certainly deserve a second and third look as ecommerce matures.

Push technologies provide an illustrative example of the timing and subsequent acceptance of new ecommerce business models. One author declared convincingly in 1997 "Push is dead" (Pflug).

Singling out one aspect of push technologies, that of Webcasting, Cronin (1997) asserts that Webcasters ought to consider delivering less content, and act more selectively in what they push, stating that "Less is more." Meanwhile, another author (Poynder, 1997) points out that consumers do not greet push technology as anything new or special. But push is making a comeback and coming into its own in some unexpected ways. It is still used to deliver news, but in addition it is an accepted form of marketing new products and updating software. Now local television channels are even pushing weather and traffic reports to a person's cell phone or palm device.

Rather than "pure players" who create and sustain their businesses solely on the Web, we see hybrids of businesses that create a synergy between their traditional and Webenabled businesses. What we see is an additive property communication ofchannels. Businesses are quite rightly unwilling to do away with their traditional processes for communicating since a customer may want to use a phone, or a customer may not be near their email, and so on. So rather than doing away with the old models, we are adopting what works. Although many consumers are replacing transportation with communication, businesses are adding to their possible communication channels. In the use of business models, whether they are new, old or a hybrid, timing is everything.

# THE NEW PARADIGM OF COEXISTENCE

The new paradigm has to do with what dynamic specialization, we call businesses adapt to their circumstances, customers and employees in a dynamic way; taking on appearances of a mega-firm when it is necessary; acting as a one-to-one counselor when that is called for. It is the idea of "skins" writ large. Why shouldn't a business on the Web be an embodiment of what a particular customer desires? A business can feature a homey, family-run look complete with casual photos of employees; or it can convey a sleek, urban appearance of professionalism with minimalist graphics. By creating ecommerce sites on the Web that respond to user requests for characteristics, we are allowing ecommerce to undertake instantaneous transformations that are impossible for traditional commerce to make convincingly.

Old businesses need not cease to be unless their customers refuse to patronize them. Ecommerce can be profitable or can help businesses reach a multiplicity of goals when it is providing something useful.

This paradigm of coexistence between the old and the new brings about many changes. It opens the door to many new rules. People have a difficult time comprehending this type of coexistence, and there is decided resistance to accepting this new paradigm. Many people refuse to believe that ecommerce will work. Just as many refuse to believe that traditional business will not be totally eclipsed by the Internet.

What is actually occurring is that people are observing the phenomena that we commonly refer to as paradoxes. A paradox is the existence of a contradiction that may indeed be true. For example, there is the classic paradox of the small group. Although members are dependent on the group for identity, members feel compelled to express their individual independence (Smith and Berg, 1987). In the next few sections we chronicle three paradoxes that are surfacing because of the new paradigm of coexistence between ecommerce and commerce. Each includes striking contradictions which are potential impediments to the comprehension of the changes wrought by ecommerce.

## THE PARADOX OF THE PROFITABLE PACKAGE

Business models have been under fire recently, and it is valid to assert that some models were built on a foundation of sand. But the criticism the Amazon.com model has received has been relentless and unrestrained. One argument goes as follows: the business model cannot work because customers will not pay 5.00 to 10.00 USD in shipping to get a book, CD or other merchandise. Adding fuel to the fire has been the revelation that ecommerce stores, like their traditional counterparts,

actually have been making money on the shipping portion of the invoice.

But it is folly to examine the parts of the system rather than the whole. A customer will certainly weigh the alternative of time versus money and transportation versus communication and determine whether costs for each small package are excessive.

Some customers will embrace ecommerce businesses. Others will not. It is possible for both types of business to survive.

# THE PARADOX OF THE MANIFOLD MARKET

The manifold or multiple market means that an event can be presented or sold to many different customers in many different forms. Ecommerce makes it possible to change the presentation or "skin" that the customer sees.

One example is the use of virtual ads that the user sees only on electronic media such as television or on a Webcast. This year, when a viewer tunes into a baseball game, the viewer may "see" an advertisement on the right field wall that doesn't exist there. Likewise, a viewer "sees" a virtual ad on the pavement of the Indy 500 auto race when fans in the stands see no such ad.

The paradox is that organizers may prefer to see fans stay home and watch an event on television or the Web in order to offer more opportunities to promote goods and services and increase revenue. But the thrill of witnessing a sporting event, concert, or drama in person will probably mean that both ways of being a spectator will coexist for some time to come.

# THE PARADOX OF THE PERSUASIVE PUSH TECHNOLOGY

Some think the Internet is too intrusive. There is a risk to one's privacy if you shop or even surf the Web. Consumers fear that some company or government will capture too much information about one's self and threaten the security or even safety of one's life. Or they believe that they are already the recipient of too much targeted advertising.

But the paradox here is that independent agents can make life easier for the consumer. An independent agent can keep track of favorites seats and departure times on an airline, and an evolutionary independent agent can observe a user's behavior and improve searches and identify offers that a user actually needs. The agent's job includes persuading the user to accept both the parameters of the search and the content itself. The paradox again assures that both systems will coexist and the same person may adopt both approaches to accomplish different tasks.

#### THE RESILIENCY OF ECOMMERCE

Ecommerce is not disappearing. Neither is it a fad, a trend, or fashion that we will soon discard. Rather, traditional business and ecommerce are both here to stay, and each will have an important part to play; often within the same company. When we return to considering the adolescent that is now ecommerce, we recognize that part of the child always remains in the adult. Wise companies will create their ecommerce strategy with the same care they use in crafting their traditional strategy.

Einstein may have desired to find a universal theory that explained the universe, but now wisdom suggests that we can use both Newtonian and Quantum theories to explain why things work. So why not adopt this analogy and assume that traditional commerce and ecommerce will both succeed? Instead of trying to argue that ecommerce will not work because it breaks the rules of conventional business models, let's assume that ecommerce will have its own theory of why things work. Instead of trying to explain the paradoxes, let's observe them. Let's study the phenomena while we reap the benefits.

#### REFERENCES

Chen, M., Nunamaker, J. and Weber, S.,
"Computer-Aided Software Engineering: Present
Status and Future Directions, *Data Base*,"
Spring, 1, (1989), pp.7-13.

Cronin, M., "Using The Web To Push Key Data To Decision Makers," *Fortune*, (136)6, September 29, (1997), p. 254.

Dart, A., Ellison, R., Feiler, P. and Habermann, N., "Software Development Environments", *Computer*, November, (1987), pp. 18-28.

Henderson, J. and Cooprider, J., "Dimensions of I/S planning and Design Aids: a Functional Model of CASE Technology", *Information Systems Research*, vol 1, No 3, (1990), pp. 227-254.

Kendall, K., "Emerging Information Technologies: Information Technologies that Support Decision Making, Facilitate Cooperation, and Enable the Information Infrastructure," in *Emerging Information Technologies: Improving Decisions, Cooperation, and Infrastructure*, edited by K. Kendall, Thousand Oaks, CA: Sage Publications Inc., (1999), pp. 1—18.

Kendall, J. and Kendall, K., Information Delivery Systems: An Exploration of Web Pull and Push Technologies, *Communications of AIS*, April 23. Vol. 1, Article 14, (1999).

Lyytinen, K. and Kendall, K., "Research Themes Encompassing Computer-supported Technologies for Information Systems Development", *The Impact of Computer-Supported Technologies on Information Systems* Development, North Holland, Amsterdam, (1992), pp. 1-21.

Pflug, O., "Push Technology: Dead On Arrival," *Computerworld*, (31) 4, (1997).

Poynder, R., "It's 'Push,' Jim, But Not As We Know It," *Information Today*, (14)11, (1997) pp. 18 & 20.

Smith, K K. and Berg, D. N., *Paradoxes of Group Life*, Jossey-Bass, Inc. Publishers, San Francisco, CA, (1987).

The New York Times, June 13, 1948, Section 10.

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