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The Y2K E-Commerce Tumble

The real millennium catastrophe was an overreliance on technology to overcome the weaknesses of a bad business model.

Y2K will prove to be one of the most interesting years in history. Not for the reasons some suspected—the synchronized global shutdown of computer systems due to their failure to recognize the date rollover to "00." In fact, Y2K probably won't be remembered for any particular technological event at all. It will be known as a landmark year in capitalism—a year of extremes. In one year, we witnessed both the greatest growth in the technology-oriented Nasdaq, as well as its impressive implosion. Y2K saw the foundation of the IT economy crumble at the same time it helped produce the largest U.S. budget surplus in history.

During the same time, investment in dot-com startups reached a feverish pace, equaled only by their precipitous fall from grace. Forget the fact that the "father" of the Internet won the Presidential popular vote but lost in the electoral college. Forget that global equities markets are collapsing despite the prevailing view that global economies have never been in better shape. Y2K may be one of the milestones in the history of capitalism, and forever secure as one of the most resonant themes in doctoral dissertations in humanities and business for centuries to come.

But what really happened? How did e-commerce fit into the historical milieu? And what's more important, did we learn anything from our experience?

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What Makes E-Commerce Possible?

There are five key ingredients to e-commerce:

- A diffuse, digital networking infrastructure (the Internet or some reasonable facsimile thereof);
- A means for delivering and rendering acceptable cybermedia content (the Web does this nicely);
- A mechanism for handling transactions in a secure environment (for instance, secure HTTP);
- A financial infrastructure to handle the accounting and invoicing for transactions in increments from fractions of a cent to millions of dollars (e-cash); and, most importantly,
- A viable business plan.

The first four ingredients were in place by the mid-1990s; the last remains elusive to the present day. Herein lies the rub: in a very real sense, the Y2K dot-com catastrophe had nothing at all to do with technology; it had to do with human frailties—greed, rapacity, egocentricity, ignorance, and a lack of common sense. The great irony of Y2K is that, contrary to the conventional wisdom, IT was basically unaffected. It was the economy supporting it that collapsed around it.

An E-Commerce Retrospective

In a very real sense, e-commerce has its origins in the bulletin boards of the 1970s. In those years, which we'll label the "Jurassic" period of computing, the dinosaurs ("mainframe computers" in popular parlance) were facing extinction, and the earliest of mammals (minicomputers) and birds (PCs) evolved quickly, each spawning a new form of communication. The two most popular, early forms of communication in this period were email and bulletin boards. What made bulletin boards effective was the ability to broadcast information. It's easy to forget that in the early days, before reflectors, deflectors, alias files, and the onslaught of spam, email was actually conceived as a vehicle for interpersonal communication. However, the historical significance of email is frequently lost when we are welcomed to work by dozens of email messages from those who would engage us in Ponzi schemes, sell us unneeded recycled printer toner cartridges, lure is into unwanted subscriptions, and otherwise beckon us to their distractions, annoyances, and sundry other pointless and unrewarding activities.

Early bulletin boards provided us with the first digital billboards. In the 1970s, no microcomputer user could live without them. They were the connectivity to Ward Christensen's latest insights, the latest Western digital disk controller card, and a variety of other silicon sundries. E-commerce was born of this mindset—using the digital networks to connect consumers and suppliers electronically. Whether the commodity was freeware or payware, advice or announcements, bulletin boards kicked off the e-commerce era.

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One might also view e-commerce from the perspective of six functional components:

- A purpose, goal, or objective;
- Meaningful content residing on a digital network;
- A market niche;
- Some mechanism for measuring success or failure;
- A transaction and interaction support infrastructure; and
- The underlying Internet and Web technology to integrate and sustain all of these components.

Some of the functional areas contribute more to the success and failure of the e-business than others. Technology, though fundamental to the overall success, is less important in the end than having a viable purpose, and that, in turn, is less important than having a viable business plan. In the scheme of things, the absence of sound technology underpinnings can kill an e-business, but its presence is no guarantee of success.

On the contrary, armed with an identifiable need, and a well-thought-through business plan, one may be able to profitably limp along for awhile while the technology platform catches up. This begins to shed light on the Y2K calamity—the venture capital fuel that created the dot-com phenomenon was focused on the technology, largely to the exclusion of the more important aspects of the e-business. For many of us in IT, the inevitable implosion was seen as long overdue. If only our portfolio managers had bothered to read our articles.

So by the late 1990s, incredibly inflated projections of the impact of e-commerce became the media mantra. The *Financial Times* (Nov. 30, 1999) reported online toy sales up nearly 100% during 1999, with a 27% increase in book and music e-tale sales over the 1999 Thanksgiving holiday alone.

Neilson/NetRatings reported an 18% growth in e-commerce over the same period. The trade press, which should have known better, got caught up in the frenzy as well. *PC Magazine* projected an order of magnitude growth in e-commerce from 1999 to 2004.

Initial success, incredibly innovative computer and network technology, massive amounts of media hype, and a considerable amount of self-serving hyperbole from startup companies was just too much for the venture capitalists to ignore. They raced to e-commerce, as moths to flame, drawing the investment community along with them as one bad idea after another spawned IPOs of unprecedented and unsustainable growth, thereby creating financial disorder where technological order had once existed. What's remarkable is this took place against a continuous stream of reality checks. *Barrons* (May 18, 2000), for example, reported that 25% of Internet companies surveyed would run out of cash within 12 months, and that 74% had negative cash flows. But the investors continued to come in droves.

What Have We Learned?

Some consequences are more evident than others. When the Nasdaq lost half its value, the world caught on that there had been more than enough irrational exuberance to go around. This much we can safely say. Unfortunately, it should have been a no-brainer from day one.

It is just as obvious that e-commerce is here to stay. Many "click and mortar" e-merchants seem to be doing well. B2B seems to be burgeoning. And Napster demonstrated that P2P will soon have a role to play. On the whole, the future for e-commerce looks quite bright indeed.

The one dark spot on the horizon is that the problem that caused the Y2K e-commerce meltdown is still with us—an over-reliance on technology to overcome the weaknesses of a bad business model.

Overall, the real millennium catastrophe was a wake-up call that even the best technology insights can be oversold. Our great challenge will be to take a deep breath during the current lull, and focus our attention on standards for the future. C

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