

Preface

Are we in the midst of a second Internet boom? If so, how it was different from the first boom of the late 1990s, which went bust spectacularly in 2001? As the stock market recovered rapidly from the dot.com crash, there have been some marked changes in the way that the Internet and e-business has evolved. In particular, behind the headlines, such as the multibillion dollar purchase of Skype by eBay and Google's sky-rocketing share prices, many smaller but innovative and profitable dot.coms have been launched, and numerous private and public sector organisations are being radically transformed. Most importantly, many radical changes predicted during the late 1990s, but dismissed during the aftermath of the dot.com crash, are maturing.

In many ways, the Internet boom itself has never stopped. Even during the stock market downturn, people from all over the world continued to join the Internet to search, chat, e-mail, play and spend money. In the business world, and in governmental and other organisations throughout the world, new strategies, new business models and new organisational designs have been introduced. The way we work, play, communicate, learn and shop has been significantly transformed; and the boundaries between sectors, products, services, channels and organisations are increasingly eroded. Most importantly, the distinctions between work, home, education, leisure and so on are increasingly blurred (Li, 2006).

E-business is not limited to the private sectors; the public sectors also are experimenting with new ways of information and services delivery via electronic channels and are actively facilitating and shaping the development of infrastructure and services. However, the challenges have been extremely complex and many e-government and e-public services initiatives have failed to deliver the anticipated benefits, and there have been numerous project failures. More significantly, the development of e-business is facilitating profound social changes and is itself shaped by a plethora of social forces. Due to the rapid pace of developments, many such issues have not been systematically examined. In 2005, I edited a special issue of the *Journal of Electronic Commerce in Organizations (JECO)* on the "Social Aspects of E-Business," in my capacity as the chair of the E-Business and E-Government Special Interest Group (SIG) of the British Academy of Management (BAM) (Li, 2005). However, due to the limited space in the journal's special issue, many significant issues were left out. This edited book will provide the capacity to present a greater number of papers in order to address these emerging issues in a more comprehensive fashion.

Social Implications and Challenges of E-Business

For several decades, we have been exploring the changing business environment as a result of the rapid development of information and communications technologies (ICTs) and the knowledge-based, networked, information economy. The Internet is particularly significant because it is facilitating profound social—as well as economic—changes. As Kelly (1997) forcefully argued:

We have been awash in a steadily increasing tide of information for the past century. Many successful knowledge businesses have been built on information capital, but only recently has a total reconfiguration of information itself shifted the whole economy ... the grand irony of our times is that the era of computers is over. All the major consequences of stand-alone computers have already taken place. Computers have speeded up our lives a bit,

and that's it. ... In contrast, all the most promising technologies making their debut now are chiefly due to communication between computers—that is, to connections rather than to computations. And since communication is the basis of culture, fiddling at this level is indeed momentous. (p. X)

Social-science thinking on ICTs and social, economic and organisational developments have been dominated by two distinct traditions. One tradition is concerned with the “impacts” or “effects” of ICTs on social and economic variables, although the crude technological determinism, which was the hallmark of this approach, and the notion of technology as an exogenous variable in social and economic changes have become increasingly untenable. The alternative major tradition has focused on the socio-economic shaping, including social construction, of technology (Mackenzie & Wacjman, 1999). The ESRC Virtual Society programme in the UK has emphasised that technologies rarely have the “effects” or “impacts” that might be anticipated from their stated technological functionality, capabilities and characteristics. Rather we need to reframe our analytical frameworks to anticipate “counterintuitive” outcomes and seek to explain and understand these as part of a process whereby technologies are shaped in use (or nonuse) in specific contexts (Woolgar, 2002).

As the Internet and related technologies and services continue to penetrate into every corner of our society and personal lives, new ways of working and living become possible, but the way technologies is used will be shaped by a plethora of social forces. All these issues need to be systematically investigated in order to understand the profound social implications and challenges of e-business. To highlight this point, some examples are explored briefly below.

Privacy in a Networked World

For years, most of us routinely gave away information about ourselves to different organisations (e.g., postal code, home phone number and date of birth). In fact, many of our personal records, held by different organisations, are listed publicly. Until recently this was largely not problematic and represented a minimal threat to our privacy because these records were widely scattered in different places, such as libraries, city halls and courthouses around the country. However, with the rapid development of the Internet and our exponentially improved ability to search, mine and manipulate data, the situation has changed radically. When public records are aggregated into an individual profile, they can become a powerful—and potentially dangerous—tool. An entire data-brokerage industry has emerged in recent years to provide such services to anyone who can afford to pay, and with minimal skills and equipment, many simple requirements can be fulfilled through a do it yourself (DIY) approach.

This is not just limited to highly sensitive personal information. If you are a UK resident, your postal code can quite accurately identify the property you live in, which can be matched with a free, property-price database on the Internet. This will provide a fairly accurate indication of the value of your property. Your car registration information (model of car and year of registration) and a free database of used-car prices on the Internet can yield information about the value of your car. Such simple information could then be combined to indicate the income level of your household, which then could be used for the effective promotion of different products and services. The potential for further combinations with other information is enormous and if not adequately regulated and actively monitored, can be misused and abused by different organizations and individuals for different purposes.

The *E-Commerce Times* reported that *The Chicago Tribune* managed to find the identities, work places, post office box addresses and telephone numbers for hundreds of CIA employees in the United States and abroad by using only public records. The data were derived from telephone listings, real estate transactions, voting records, legal judgments, property tax records, bankruptcies, business incorporation papers and so on. What is particularly alarming is that “with only a credit card number, the *Tribune* was able to obtain nearly all the information it had acquired from data providers. That included the names of clandestine CIA operatives assigned to U.S. embassies” (Crewdson, 2006).

If even the CIA cannot keep such information safe, then everyone should be concerned. Our information is not limited to what is stored in different public records—just imagine what our banks, supermarkets and credit

card companies know about us. Through records such as the loyalty-card schemes, supermarkets know exactly what we buy each week, which can be used to maximize revenue and profit, and improve the effectiveness of promotions. More worryingly, our credit card companies know exactly where we shop, eat, entertain, travel, and stay. When such information is harnessed and built into an individual profile, our privacy could be under serious threat, if the use of such information is not tightly regulated. Are existing measures sufficient? Or are new legislations necessary to adequately protect us against misuse of such information? The difficulties involved in enforcing existing and new rules are also enormous. Many other serious issues, such as identity theft, are just beginning to emerge and the full implications are not yet understood. Such issues will certainly need to be systematically investigated.

Living in ‘Two Spaces’: MMORPG Meets the Real World

In 2001, colleagues and I published a paper titled, “Between Physical and Electronic Spaces: Implications for Organizations in the Information Economy” (Li, Whalley, & Howard, 2001). In that paper, we argued that with the rapid development of ICTs, a new electronic space has emerged that coexists and sometimes intertwines with the physical space of our “real” physical world. This significantly increases the complexity and flexibility of our space economy for organisations and individuals, and increasingly we have to live in “two spaces.” Although the misconception about the “death of distance” and “end of geography” in the information economy has largely been dismissed, the full implications—and the enormous complexity—in our space economy are yet to be fully appreciated. As the “two spaces” continue to evolve and intertwine at unprecedented complexity and speed, numerous new issues have emerged.

For example, millions of people play online role-playing games that also are known as massively multiplayer online role-playing games (MMORPGs). In these games, a large number of players interact with one another in a virtual world either using their existing identity in the physical world or, more often than not, through a new virtual identity that might not even be remotely linked to the identity of the player in the physical world. Examples of such games include *Second life*, *EverQuest*, *World of Warcraft* and *Entropia Universe*, to name a few. MMORPGs are immensely popular, with several commercial games reporting millions of subscribers. In most of these games, players assume a different identity (from their physical world identity), which evolves through interactions with the virtual identities of other players in the electronic space.

It should be noted that significant economic activities take place in these virtual worlds. Large amounts of real-world money is spent on the virtual characters, and the wealth generated in the virtual world can be easily converted into real money through the services like eBay. For example, in *Second Life* alone, residents spend an equivalent of \$5 million each month for virtual products and services for their virtual characters, and this figure is rapidly growing. Many virtual entrepreneurs, such as fashion designers for online characters, have quit their real-world jobs to focus on their virtual-world businesses—and the virtual dollars they earn in these games can then be converted into real-world money (Hemp, 2006).

In December 2004, a 22-year-old gamer made history by spending \$26,500 (£13,700) on an island that exists only within the game *Project Entropia*, an MMORPG that allows thousands of players to interact with each other. The Australian gamer, known by his gaming moniker, *Deathifier*, bought the island in an online auction (BBC, 2004). The virtual island includes a gigantic abandoned castle and beautiful beaches ripe for the development of beachfront virtual property for different virtual characters. *Deathifier* made money from his investment by taxing other gamers, who came to his virtual land to hunt or mine for gold. He also sold plots to people who wished to build virtual homes on his virtual island.

Living through those virtual characters—also known as Avatars—can be an intense social experience, and many players spend as much as 40 hours a week in those worlds. Many commercial organisations already advertise in these virtual worlds, and some even developed their own MMORPGs for their targeted audience (e.g., The Coca-Cola Company’s *Coke Studios* and Wells Fargo bank’s *Stagecoach Island*) (Hemp, 2006). In many ways, the virtual world is as real as the physical world. Real commercial transactions and social interactions take place between the virtual identities of different players, whether they are from the same city or the other side of the

world. Within the virtual world, players can set up virtual businesses that sell products and services to other virtual players; and the wealth generated can be spent on other virtual products or services, or converted into real money for spending in the physical world.

In fact, from an e-business perspective, the evolution of the virtual world will significantly extend the range and scale of activities because, in addition to the existing categories of e-business activities between individuals and organisations in the physical world via electronic channels (such as, B2B and B2C), these activities are also developing in parallel within the virtual world and have enormous business and social implications. For example, you can set up a Web development company to develop e-commerce systems for virtual companies inside a MMORPG, which will create new categories of e-businesses, such as virtual business to virtual consumer (VB2VC) and virtual business to virtual business (VB2VB). Furthermore, such virtual relations can be extended to interact directly with the physical world, so a virtual service can be sold to real businesses in the physical world—virtual business to physical business (VB2PB) or vice versa. One example is a company serving the physical world marketing their products via virtual companies inside MMORPGs. Such developments will significantly complicate the interplay between the physical and the virtual spaces and entities.

For a marketer, for example, these developments raise serious challenges. How effective would it be for a physical-world brand to be marketed within the virtual world, perhaps inside a particular MMORPG? Should the marketer be targeting the Avatars inside the game, or the real players behind the Avatars? The social implications will be profound. The meaning of the real/physical and the virtual will need to be redefined; and our social interactions with one another and with businesses and other organisations will need to be significantly extended. MMORPGs are an example where the virtual world significantly extends our physical world, and the interplay between the physical and the virtual creates numerous opportunities and challenges with economic and profound social implications. Many of these issues are still poorly understood and systematic research is urgently needed.

E-Government, E-Public Services and E-Learning

In 2000 *The Economist* magazine famously announced that after e-commerce and e-business, the next Internet revolution would be e-government (*The Economist*, June 28, 2000). The UK government set itself an ambitious target for the provision of public services electronically, that by the end of 2005 every public sector that can be provided online must be online. It also wanted to make the UK the best place in the world for e-commerce. Billions of pounds have since been invested in central and local governments, the health services and other public-sector organisations in order to achieve the target, with £14 billion per year being spent on computer systems and service (Cross, 2005). Similar initiatives have been launched by governments all over the world, not only in developed countries, but also in an increasing number of developing countries.

This book defines e-business broadly and regards e-government and e-public service as a subset of e-business—the use of Internet and related technologies to transform public services and the organisations providing them. However, due to the profoundly different issues and challenges in public services compared with the commercial sectors, e-government and e-public services have increasingly becoming an area of study in its own right (Li, 2006).

E-business in the private sector is profoundly different from e-government and e-public services in several ways. For private sector businesses, the dominant logic is relatively clear and simple: any business needs to make more money than it spends in the long term; it needs to generate adequate returns for its investors; and it needs sufficient cash to keep it going. There are many other stakeholders, such as employees, managers and the government, but the dominate logic for private-sector business is simple—to generate profit for its shareholders, even though it has responsibilities for employees and for the wider community. Recently, considerable attention has been paid to issues such as corporate social responsibility but the dominate logic of business in the private sector remains unchanged (Bakan, 2004). In contrast the logics in the public sector are much more complicated. There are multiple, sometimes equally powerful, stakeholders, and many public-sector organisations exist to protect the weak and disadvantaged. Many public services have no alternatives so they have captive audience.

The differences, and sometimes conflicts, between the different logics—and between different strategic objectives—are often difficult to reconcile. What works in the private sector rarely works in the public sector in the same fashion, even after serious adaptation and adjustment (Li, 2006). There have been numerous high-profile failures of major e-government projects throughout the world, highlighting the enormous challenges involved.

In education, significant investments have been made by both the private and public sectors in the name of e-learning. The result has been somewhat less than spectacular, and there have been many high-profile failures. From an e-business perspective, the Internet and related technologies can be used in two different ways in facilitating teaching and learning. On the one hand, the technologies can support and supplement existing modes of teaching and learning by continuing to do what we used to do better or differently. Most existing e-learning initiatives perhaps fall into this category. However, on the other hand, it is possible to use the Internet and related technologies to enable radically different and far more effective modes of teaching and learning in ways not possible or not even imaginable in the past. For example, my teenaged son learned to play the electric guitar almost exclusively using free resources on the Internet, including free literature as well as tips from other guitar enthusiasts in various online forums and chat rooms with Web cams and online chats. When I talked about this at a recent ORACLE Executive Learning Workshop, a number of colleagues said that their children did exactly the same thing. This example indicates not only the enormous untapped potential of e-learning, but also, perhaps, that we are missing a trick in our pursuit of e-learning?

The Purpose and Structure of this Book

This book is part of our effort to address the profound social implications and challenges of e-business and improve our understanding of how the development of the Internet and e-business shapes, and are shaped, by various social forces; and the difficulties and challenges involved in applying e-business technologies and principles to public services and other nonbusiness activities. The vast range of topics involved means this book will only begin to address issues in this complex, rapidly evolving area, rather than providing a systematic exploration of the field. Papers selected for this volume will explore the social implications and challenges of e-business and e-commerce in terms of social inclusion and exclusion and the digital divide; the social shaping of e-business technologies; the changing nature and patterns of work and social activities; and online identity, security, risks, trust and privacy. The authors also will explore the applications of e-business technologies and principles in public services and nonbusiness activities and the challenges involved.

As such, this book will be structured into two main sections. The first section will look at the challenges and opportunities involved in applying the Internet and related technologies in government, public service and other noncommercial sectors. The second section will examine issues in the broad area of social shaping and construction of the Internet and related technologies, and the enormous social implications and challenges of e-business.

Section I: Opportunities and Challenges in E-Government and E-Learning

In Section I, seven papers have been selected. In Chapter I, Blass, Ettinger, and Holton of Ashridge Business School (UK) highlight some of the differences that occur when higher education is provided through e-learning and argues that the challenges that students face and the differences in student-tutor and student-student interactions are sufficiently different to warrant that such degrees be awarded under a separate qualification classification. Drawing on research carried out at Ashridge into the realities of getting started in e-learning and a literature review of e-student and e-tutor issues, the argument is made that actually succeeding at this form of learning requires additional skills, motivation and discipline that should be more widely recognised and that this would be best achieved through a separate qualifications classification. Such a classification also would enable issues surrounding quality and standards to surface, ensuring that e-learning degrees are equivalent to their more traditionally taught counterparts.

Godshalk of the Pennsylvania State University (USA) offer a model and various propositions that investigate whether computer-mediated communication (CMC) technology allows the development of e-mentoring relationships. Specific environmental conditions, such as the social influences of peers, supervisors and the organisation's culture, as well as personal characteristics, are posited as antecedents of an individual's choice to use CMC and subsequent engagement in an e-mentoring relationship. E-mentoring is clearly a new tool individuals may use to enhance their careers, yet the social implications of this phenomenon are still under investigation. The real challenges surrounding e-mentoring involve what effect, if any, the lack of face-to-face interaction has on dyad members, their organisation and their career progression. Given our technology-driven environment, understanding who might adopt, pursue and gain from e-mentoring relationships is a new research direction that will make a significant contribution to our literature.

Hoanca and Mock of the University of Alaska Anchorage (USA) examines how e-learning technologies have emerged as a cost-effective, interactive means of delivering quality teaching to even the most isolated locations in Alaska. Additionally, the ability to archive content and to access it at will, in an asynchronous manner, is highly suited to the different learning styles and different learning rates of the various populations in the state. This chapter introduces the challenges associated with delivering e-learning in Alaska, reviews the historical evolution of distance-learning networks, and summarizes present achievements and future opportunities. The analysis includes K-12 education, college and professional continuing education. For the state of Alaska, geography, climate and cultural diversity make distance education highly desirable for providing quality education options to all state residents. E-learning technologies provide multimedia-rich learning content, can adapt to a variety of bandwidth channels and allow for interactive but asynchronous interaction.

Connolly and Stansfield of the University of Paisley (UK) introduce games-based e-learning as a means of providing enriching and stimulating learning experiences within higher education and training. It highlights how e-learning has evolved and the developments that have opened the way for games-based e-learning by giving examples of specific applications. Through gaining a better understanding of the implications, challenges and barriers to games-based e-learning, educators, practitioners and developers will be able to make better use of and gain substantial benefit from these exciting learning technologies. The chapter also will identify some future trends in relation to e-learning and games-based e-learning.

Chang and Chen of YuanPei Institute of Science and Technology, Taiwan, introduce a CRM-based e-government usability services framework by exploring the relationship among the different e-government stakeholders and by integrating internal and external customers in public services. An evaluation system for the usability of government Web sites is developed and empirically tested, which supports the relationship management between citizens and government employees. They also suggest a number of issues for future research.

Boondao of the Ubon Rajathane University (Thailand) and Tripathi of the Asian Institute of Technology (Thailand), explore the field of e-policing and introduce a framework of mobile policing for crime control and citizen services, derived from the system requirements of both police and citizens. They examine how an e-policing system is using this framework to improve the effectiveness and efficiency of crime control and also providing services to citizens. In particular, the system not only simplifies the collection, storage and retrieval of crime data but also uses Bayesian analysis to give constantly refined predictions of the risks of crime in different localities, along with the factors influencing the risk levels.

Hassan of the Northern University of Malaysia and Li of the University of Newcastle upon Tyne (UK) use a benchmarking approach to develop a structured framework for evaluating Web sites' usability and the usefulness of their content. The chapter describe the purpose of the evaluation, metrics to be used and processes through which Web benchmarking can be carried out. Several methods were used including content analysis of literature and expert review. A total of 46 criteria were identified that can be used as the benchmarking metrics. The framework was tested for its applicability by evaluating four political Web sites in Malaysia. The results proved that the framework is easy to implement and would be particularly valuable for those who intend to benchmark the overall usability and usefulness of their Web sites against those of their competitors.

Section II: The Social Shaping, Construction, and Consequences of E-Business

In Section II, seven papers have been selected that explore the social implications and challenges of e-business. Treiblmaier of Vienna University of Economics and Business Administration (Austria) investigates the influence of the Internet on relationships between consumers and vendors. In the precomputer era, relationships always implied a social dimension, which modern technology tries to mimic by learning about customers' needs and addressing them individually. Treiblmaier investigated how relationships are defined in scholarly literature and how consumers define what they perceive to be the crucial attributes of a relationship, in general, and with an online organization, in particular. The chapter concludes that the notion of relationship has to be redefined for online communication and interaction, and offers practical implications for designing the interaction process with online users

Jovanovic, Mihic, and Petrovic of the University of Belgrade (Serbia), explore the social implications of managing project stakeholders with particular reference to e-project management, including the architecture and importance of project management (PM) portals and the way they are related to e-projects. The authors argue that PM portals are indispensable in project collaboration and coordination and are closely related to e-projects, since the portals play a key role in both the PM implementation and an adequate incorporation of and discussion with all project stakeholders. The authors believe that a detailed analysis of project stakeholders and PM portals presented in this chapter allows for a thorough review of strengths and weaknesses of the e-project approach, and it will provide the basis for understanding the social aspects of modern ICT solutions in e-project management.

Pandya of Northeastern Illinois University (USA) and Dholakia of the University of Rhode Island (USA) explore B2C failures by introducing an innovative theoretical framework. Using the product and services innovation failures literature, this chapter develops a framework to help understand why so many Internet-based B2C "dot.com" companies failed to fulfil their initial promise. Viewed collectively, B2C dot.com crashes constitute an initial wave of failure of an entirely new class of technology-driven services. Such services sought to inform, promote, sell and deliver B2C items in radically unfamiliar ways. Besides ignoring basic precepts of sound business practice, unsuccessful B2C firms failed to realize they were marketing *innovative services*. The authors place B2C dot.com ventures in a need-solution context of innovations, in conjunction with the notion that seller/buyer perceptions about the scope of innovations are not necessarily concordant. Matched perceptions between sellers and buyers lead to success. Sellers as well as buyers, however, can misjudge the nature and scope of innovations. Using case evidence, the chapter illustrates the explanatory power of the framework and contributes to e-commerce issues by clarifying why, despite resource availability, many early B2C firms failed due to misjudged perceptions of the sellers and/or buyers

Bunduchi of the University of Aberdeen Business School (UK) discusses the role that social relational characteristics, such as trust and power, play in shaping the use of a particular type of e-business application—electronic markets (EM). The analysis is based on a case study of an EM in the electricity sector. The study finds that the use of EMs to take advantage of a superior power position to achieve cost reductions breeds mistrust and erodes suppliers' bargaining power. The findings support the argument that social relational characteristics, such as trust and power, are significant factors in shaping the use of EM in transactionally oriented relationships

Lakka, Lionis, and Varoutas of the University of Athens (Greece) investigate the social aspects of open-source software (OSS), also known as free software (FS). They discuss OSS/FS from three perspectives: motivations that lead to OSS/FS, the organization of OSS/FS communities and the economic theory as a means of explaining the phenomenon. The chapter analyses the social implications behind OSS/FS diffusion, together with the social processes that take place in OSS/FS communities in an effort to enhance our understanding of the diverse mechanisms that disseminate OSS/FS rapidly.

Bonney, Komolafe, and Tait of the Robert Gordon University (UK) explore digital inequality. They argue that there are substantial inequalities in access to and use of the Internet. These inequalities are built on enduring

social and economic inequalities that are rooted in previous rounds of the development of electronic technologies and have largely resisted public policies designed to remedy them. Rapid developments in the use of the Internet have great potential for commercialisation and democratization, but digital inequality means that this potential is not always exploited to the advantage of the poorer sectors of the community. Recent public policies have attempted to remedy digital disadvantage, but there is little evidence that they are fundamentally transforming them. Constant innovation enables the more advantaged sectors to advance their position, while many are still excluded from compensatory attempts at catch-up. An increasing body of experience suggests new approaches, but the magnitude of the challenge of ending digital inequality should not be underestimated.

Finally, Genus and Nor of the University of Newcastle upon Tyne examine the digital divide from a social shaping of technology perspective. The digital divide is a phenomenon associated with disparities between groups and societies in the adoption and diffusion of electronic ICTs and e-business practice. The chapter argues that, in rhetoric at least, the innovation, adoption and diffusion of ICTs bear the hallmark of technological determinism (i.e., that of a technical imperative) in which social, economic and political factors are underplayed. By way of contrast, the chapter considers the merits of a social-shaping approach to the analysis of innovation in ICTs to assess the prospects for ameliorating the digital divide between developed and developing countries and for stimulating economic development in the latter through the promotion of e-business. The chapter suggests how future research on the social shaping of ICTs, e-business and the digital divide between developed and developing nations can meet the challenges discussed therein.

What is Next?

Despite the radical changes we have witnessed in the last 10 years or so, we have probably only seen the tip of an iceberg and barely scratched the surface of the e-business phenomenon. The papers presented in this book, as well as those included in the special issue of *Journal of Electronic Commerce in Organizations* (Li, 2005), represent our attempts in making sense of the complex social implications and challenges of e-business. We hope this book will be relevant to academics and practitioners interested in the social aspects of e-business in private- and public-sector organisations. It should be particularly useful to researchers, postgraduate and undergraduate students, businesses and information systems professionals, and management consultants interested in the broad context of e-business, the social forces that shape the development of the Internet and e-business, and the social changes and challenges brought about by such developments. This is still a rapidly evolving and expanding area, and more research is clearly needed.

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