
Editorial

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Biographical notes: Professor Feng Li, PhD, is Chair of E-Business Development and the Convener of the Management Subject Group at the University of Newcastle upon Tyne Business School, UK. His research has centrally focused on using information and communications technologies to facilitate the development of new strategies, business models, and organisational designs in both private and public sector organisations. He is a Council Member of the British Academy of Management (BAM) and Chair of the BAM E-Business and E-Government Special Interest Group. His recent work on Internet Banking Strategies and Business Models, and on the evolving Telecommunications Value Networks and Pricing Models have been extensively reported by the media. His latest book, *What is E-business? How the Internet Transforms Organisations*, has been published by Blackwell (Oxford).

The internet boom started in the mid-1990s, and it quickly developed into a dot.com bubble on the stock markets, which went bust in 2001. However, the market recovered very rapidly and by 2005, there were already talks about a second internet boom, which is relatively low profile but in many ways much more robust than the first one. For many commentators, the internet boom itself has never stopped, because even during the stock market downturn, people from all over the world continued to join the internet to search, chat, e-mail, entertain and spend money. The way we work, play, communicate, learn and shop has been transformed significantly; and in organisations throughout the world, new strategies, business models, organisational designs and new ways of working have been introduced to exploit new opportunities – or simply to fend off advances from old and new competitors. Furthermore, e-business is not limited to the private sectors, and the public and voluntary sectors are also introducing new ways of information and services delivery via electronic channels, and actively facilitating and shaping the development of information infrastructure and services.

In the midst of such rapid changes, some fundamental questions remain unanswered today: What is e-business and does it still matter? If so, in what ways and what can we do about it? Most of all, where is it going and what are the main opportunities and challenges? This special double issue on *Making sense of the e-phenomenon* is part of our efforts to explore these issues.

The new business environment: the evolving context for e-business

Today, 'information' (broadly defined) has become the most critical strategic resource upon which the efficiency and competitiveness of all organisations depend. The continued rapid development of Information and Communications Technologies (ICTs) enables us to acquire, store, communicate and manipulate the most important resource of the economy (*i.e.*, information) cheaply and often in ways not possible in the past. The combination of these developments means that all organisations should review the way they are organised and managed. In this sense, e-business is not just another management fad created by academics and the media, and pushed by business consultants and technology companies. It calls for the development of a new generation of organisation and management theory for the networked economy.

The new business environment has been evolving rapidly for several decades, and just when we thought the most radical changes have already happened, another round of even more radical changes takes place, bringing with them a new set of opportunities and challenges. One such development is the so-called Massively Multiplayer Online Role-Playing Game (MMORPG) which is not only rapidly growing as an industry, but also significantly extending our social and business space. More importantly, people are increasingly crossing over the virtual and the physical worlds – both socially and economically. The full implications of such developments are still poorly understood today.

In 2001, I, with some colleagues, published a paper entitled 'Between physical and electronic spaces: implications for organisations in the information economy'. In that paper, we argued that with the rapid development of ICTs, a new electronic space has emerged, which coexists, and sometimes intertwines with the physical space and place 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.

Today, millions of people from around the globe play online role-playing games (MMORPG), in which 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 are *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 social and economic interactions with the virtual identities of other players in the electronic space.

It should be noted that a significant amount of economic activities takes place in these virtual worlds: huge amounts of real-world money are spent on the virtual characters, and the wealth generated in the virtual world can be easily converted into real money. 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 is rapidly growing.

Many virtual entrepreneurs, such as fashion designers for online characters, have quitted their real-life jobs to focus on their virtual world businesses – and the virtual money they earn in these games are then converted into real-world money.

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 name Deathifier, bought the island in an online auction. The virtual island includes a massive abandoned castle and beautiful beaches ready for developing beachfront virtual properties 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 some players spend as much as 40 hours a week in those worlds. Many commercial organisations already started advertising in these virtual worlds, and some even developed their own MMORPGs for their target audience (*e.g.*, Coca-Cola's *Coke Studios* and Wells Fargo Bank's *Stagecoach Island*). In many ways, the virtual world is as real as the physical world. Commercial transactions and social interactions take place between the virtual identities of different players either from the same city or from the other side of the world. Within the virtual world, players can set up virtual businesses selling products and services to other virtual players; and the wealth generated can then be spent on other virtual products or services, or converted into real money for spending in the physical world.

The crossover between the virtual and the real worlds are taking place along multiple dimensions. On 13 May 2006, for example, BBC Radio One's Big Weekend Concert in Dundee (Scotland) was not only broadcasted on digital television and performed live to a crowd of real people, it was also staged in the virtual space of an MMORPG – *Second Life*. A large virtual crowd (in the form of Avatars within the game) gathered at the concert. There is no reason why a virtual concert cannot be broadcasted live to a real-world audience on television.

From an e-business perspective, the evolution of the virtual world will significantly extend the range and scale of activities. 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), such activities are developing in parallel in the virtual world, and more significantly, crossing over between the physical and virtual worlds – with 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), or 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 coming to mind is that a company serving the physical world (either a dot.com company or a manufacturer) can market its products and services via virtual companies inside MMORPGs. Such developments will significantly complicate the interplays between the physical and the virtual spaces and entities.

For a marketer, 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 (virtual characters) inside the game, or the real players behind the Avatars? The social implications will be profound, too. 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 to our physical world, and the interplays, and crossover, between the physical and the virtual creates numerous opportunities and challenges, with profound economic as well as social implications. Many of these issues are still poorly understood today and systematic research is urgently needed to make sense of the rapidly evolving e-phenomenon.

Making sense of the e-phenomenon

The rapidly evolving business environment means that despite the radical changes we have witnessed in the last ten years or so, we have probably only seen the tip of the iceberg, and indeed, barely scratched the surface of the e-phenomenon. In this special double issue, a wide range of emerging issues in the private and public sectors are identified, investigated and conceptualised and areas requiring further research are highlighted. The e-phenomenon is still evolving and expanding rapidly, and continued research is clearly needed.

Part I

In the first paper, Li of Newcastle University, UK, examined how, and why, the e-phenomenon has evolved since the mid-1990s. He argued that with its rapid conceptual and application expansion, the limited conceptual clarity of e-business that existed in the 1990s has evaporated almost entirely today – and it is becoming increasingly difficult to see what is not e-business. This paper examined what is and what is not e-business, and then outlined a broad conceptual framework to underpin and integrate the vast range of issues in this rapidly evolving field. The dot.com burst in 2001 did not mark the end of e-business, and many radical changes predicted during the dot.com boom but dismissed in the aftermath of the dot.com crash are materialising today. He went on to argue that some of these changes are so profound that a new generation of organisation and management theories are perhaps needed. This paper also serves as an overview of the key issues addressed in this special double issue.

Kolsaker of the University of Surrey, UK, explored critical issues in understanding e-government in the context of the knowledge society. She argued that governments are investing heavily both politically and financially in the knowledge society as a route to economic growth and international competitiveness. Web technology is embraced as an efficient, cost-effective platform for national knowledge management, with e-government in particular being welcomed as means of engaging citizens directly in knowledge creation and dissemination. The discourse of the knowledge society assumes that governments play a robust enabling role, however, this ignores important features of post-industrial, supra-national governance such as the diminishing role of government in national policymaking and possible divergence of ‘public’ and ‘national’ interests.

In addition, in embracing e-government as a facilitator of the knowledge society, governments tend to underplay the significance of entrenched cultural and operational barriers in public sector bureaucracy and citizens' reluctance to engage. This paper argued that it is only by factoring in such complexities that governments can truly understand e-government in the knowledge society and proposed that well-established marketing practices should be adopted to provide pragmatic, user-centric approaches to knowledge-driven citizen engagement.

Roy of Dalhousie University, Canada, provided a critical assessment of both the Canadian federal government's experience to date with online service delivery and the prospects for Service Canada, a new vehicle for government-wide service transformation. The paper focused on the organisational dimensions to this transformation, and five major sets of factors are adopted to analyse the prospects for this government-wide service transformation initiative. He concluded that in order for Service Canada to succeed, significant effort is required in addressing the relevance and management of a multi-channel service apparatus, the governance architecture, the importance of management by networks, public-private partnering, and senior management and political support.

Lane, University of London, Snaith of London South Bank University, and Lane of the University of Southampton, UK, investigated e-health as a subset of the e-phenomenon. They argued that the UK government is making significant investments in new e-health projects but the healthcare sector has historically been slow to adopt IT solutions. Using NHS Direct as a case study, the paper highlighted the importance of management of change, skilled managers and organisational maturity in the success of its conceptualisation and implementation. The relevant strengths and weaknesses of other e-health projects are also highlighted. They concluded that the e-phenomenon will continue to make positive contributions to healthcare. Well-established theoretical models should be applied to future projects and the potential threats to current e-health projects should be acknowledged and addressed.

Connolly and Stansfield of the University of Paisley, UK, discussed their experience in using games-based e-learning in teaching an IS course. They argued that in higher education, e-learning has evolved from a marginal form of education to a commonly accepted alternative to traditional face-to-face education. The term can cover different delivery models ranging from courses that are delivered fully online to courses that provide some face-to-face interaction and some online provision. Within this continuum, interactive technologies can play a significant role in engaging the learner and providing a rich learning experience. This paper examined how different interactive technologies, such as visualisations and simulation games, can be used to enrich the learning experiences of students with different learning styles. The experience of teaching Information Systems in a postgraduate MSc Management of E-Business course was used to support the arguments.

Luarn and Chen, National University of Science and Technology in Taiwan, explored Critical Success Factors (CSFs) related to the promotion of e-learning. Following preliminary in-depth interviews of 20 practitioners, a questionnaire was developed and completed by 394 employees enrolled in e-learning programmes. An analysis showed that four factors: real-time and complete information, personalised interface, interface friendliness, and entertaining and interactive functions, contributed a total variance of 56% in the CSFs. They also found that employees' learning performance

had the most significant impact on their positive evaluation of e-learning. Enhancing the function of information technology systems will improve the users' perception and adoption of e-learning. A positive circle can be created in which the enthusiasm for e-learning leads to its greater adoption by employees, which increases the probability of successful outcomes.

McRobb and Stahl of De Montfort University, UK, compared the privacy policies in e-government, e-commerce and e-reaching. The paper argued that one of the characteristics shared by most aspects of the e-phenomenon is that it poses new challenges to privacy. This paper discussed the concept of privacy and analysed what differences regarding the attention to privacy exist among different sectors. Based on a broad literature review on the ethical foundations of privacy, they identified and investigated three research questions:

- 1 What are the reasons given by organisations to protect privacy?
- 2 What is the perceived nature of privacy?
- 3 How do organisations address different stakeholders?

These questions are explored by analysing the privacy policies of organisations from three different sectors. They concluded that the three sectors come to different answers to the above question but privacy is an overarching concern that needs to be addressed.

Part II

Ghosh of Bournemouth University and Bertisen of the Dixons Group, UK, proposed a new conceptual model for e-business networking. The model consists of 18 critical success factors of e-business operations, which are integrated in four categories: strategic network performance represent the core, surrounded by network marketing, network design and network value delivery. Based on the findings of a pilot survey among e-businesses, an importance index of the critical success factors was developed. The conceptual model could be of value to e-businesses engaging in network collaborations for sustainable competitive advantages.

Fang of University of Western Ontario, and Dong of Ryerson University, Canada, investigated the concept of organisational virtuality from an environment-adaptation perspective. Today, an increasing number of organisations are going virtual, using ICTs to connect to geographically dispersed and functionally diverse units. However, existing literature lacks a clear understanding of what makes an organisation virtual, and how environmental factors may affect the extent of organisational virtuality. This paper offers a definition of organisational virtuality, and based on the environment-adaptation theory, they investigated environmental influences on organisational forms and discussed the implications of going virtual for researchers and practitioners.

Barlow of Glasgow Caledonian University, and Li of the University of Newcastle upon Tyne, UK, examined the development of e-business within the supply chain domain. Their case studies highlighted an increased uptake of e-business activities across supply chains, and identified a shift in focus from routine to more strategic activities across the whole supply chain network. The paper also identified a number of strategic opportunities that can be supported through e-supply chains. Firstly, e-business technologies are being used for integrating supply chain-related systems, leading to improved information sharing and visibility. Secondly, they are being used to increase the

flexibility of supply chains; and thirdly, for improving the level of personalisation in supply chains. Organisations are, however, likely to face a range of organisational, security, technological, cultural and social barriers that may challenge the use of e-supply chains. A number of areas for future research are also highlighted.

Sabat of Perot Systems Corporation, USA provided a theory to account for how emerging business models and trends are driving scale and scope economies in the mobile wireless industry. As difficult market conditions persist, the industry players have been striving to streamline their services, applications, and revenue models to build sustainable businesses. Based on extensive studies of investment patterns and business models of companies operating across the world, this paper described eight emerging technological and business trends and models, and how these models are improving operational efficiencies in the value chain, thereby growing sustainable businesses.

Berthon and Williams of Bentley College, USA argued that digital networks such as the internet are facilitating and accelerating a change in the relationship between producers and customers. The change embodies a profound shift in power and ideology whereby people become co-producers of value rather than passive consumers. This transition is increasingly mirrored in US politics. Rather than simply choosing between competing candidates, the internet and web-based tools enable voters to become co-producers. In this nascent era of e-democracy, there is a dearth of conceptual frameworks with which to make sense of the phenomenon. This paper explores how an open source model of business and politics emerges, its stages and characteristics, and prospects for changing entrenched political processes.

Vatanasakdakul and D'Ambra of the University of New South Wales, Australia introduced a conceptual model for e-commerce adoption in developing countries. They argued that the adoption of B2B e-commerce in developed economies has, overall, been successful. This success, however, has not been reflected in developing countries, indicating that models for IT adoption in developed economies may not be appropriate. In response to this, they developed a strategic-fit perspective to investigate the issue of successful adoption of inter-organisational information technologies in developing countries. This perspective is operationalised through the task-technology fit model by integrating inter-organisational theories and theories of national culture. The model should be particularly useful in understanding how organisations in developing countries may adopt e-commerce technologies to enable online business processes in B2B settings.

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who submitted papers for this special issue. Owing to the large number of submissions received, reviewing all the papers was no trivial task. I would like to thank everyone who helped with the review process. Without their timely effort and constructive criticisms, this special double issue would not have been possible. Because of the large number of people involved, I am unable to thank them individually here, but their support is greatly appreciated.

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We hope you will find this special double issue informative, thought provoking, theoretically challenging, and practically useful. This is still a rapidly evolving area, and more research is clearly needed. We welcome any comments, feedback, suggestions and constructive criticisms.

Any errors remain the responsibilities of the authors.