Prometheus, Vol. 23, No. 4, December 2005

Book Reviews

The World is Flat: A Brief History of the Globalized World in the 21st Century

Thomas Friedman

London, Allen Lane (Penguin), 2005, viii + 488 pp., UK £20, ISBN 0 713 99878 4

Do You Know What 11/9 Was?

Thomas Friedman's name is almost always preceded by the adjectival clause 'Three times Pulitzer Prize winner'. There is every chance of a fourth outing for his dinner jacket when this book comes up for consideration by the Pulitzer judges, as it surely will.

It is easy to see why *The World is Flat* is selling well. For one thing, it is about a huge world issue. On the day this review was being written, UK Prime Minister Tony Blair addressed the European Parliament and devoted much of his speech to the Chinese threat to the European economy, one of Friedman's main concerns. Although Friedman sees things through a US rather than an EU prism, his topic is a hot one.

Friedman also thinks clearly and writes well, as befits a big-name *New York Times* columnist, although some of his sentences need a little calming down. And despite being politically a conservative, he is not afraid of radical thought. He has also used the journalist's privilege of being able to go anywhere and meet anyone to good effect. So what he has to say is well-grounded as well as imaginative. In an era when editors hate to see journalists cut their productivity by leaving the office, and would prefer that they stayed at their terminals typing, his work is evidence that old-fashioned methods involving the erosion of shoe-leather have something to be said for them.

Readers of publications such as *Prometheus* might well claim that his central message is one they have regarded as obvious for years. He thinks that the collapse of communism, the world spread of capitalism, the lowering of tariff barriers and the spread of communications technology have altered the world fundamentally. Now you have to compete with rivals in China or India as well as those on your doorstep. And the competition is intensifying whether the unit you consider is the individual, a small business or a megacorporation.

However, Friedman's message is more subtle than this. Refreshingly, he does not accept the idea that the Chinese, for example, are doomed to remain low-cost

Prometheus ISSN 0810-9028 print/ISSN 1470-1030 online © 2005 Taylor & Francis
http://www.tandf.co.uk/journals
DOI: 10.1080/08109020500415089

producers of goods that have been thought up and designed in Munich or San Francisco. Instead, he points to the world-class education system of India and the rapidly-growing universities of China and sees no reason why these higher-value activities could not be done there too.

Indeed, the reader who will get the biggest shock from Friedman's book is anyone who has assumed that their specific profession is immune from world competition, enabled by new technology. For example, would a US citizen get a US accountant to do her taxes, or one in India? The answer is that if she hands over the task to an accountant in the US, the work is very likely to be done in India. One of the most telling of Friedman's discoveries is that this does not only apply to customers of major multinational accounting firms. There are growing businesses that make it easy for corner-shop companies in the US to access cheap and professional workforces in Asia.

But Friedman does have something for your comfort. He offers a number of hints for anyone wanting to stay in work. This can only be done, he says, by becoming 'an untouchable'. One way is to be genuinely special. He eccentrically cites Barbra Streisand, Bill Gates and Michael Jordan as examples. However, joining that club is not an option for most of us. For the rest, a better bet is to become a specialist with some non-fungible skill. He lists a number of worthy trades to join, such as high-level legal work, software writing and robot operating, but there are probably other more exciting options such as reading the weather on the TV or cooking a perfect French meal.

Failing that, do something 'anchored' such as teaching, or cutting hair, or being a waitress, that genuinely does require physical presence. But be aware that parts of even these jobs are likely to vanish offshore, while the parts that remain will become fiercely competitive. Even in trades that have traditionally required little personal development on the part of their practitioners, people are going to need to be more skilled and innovative.

As an American and a liberal, Freidman regards these apparently distressing developments with equanimity. As he says, the prospect of over a billion Chinese becoming prosperous is an opportunity, not a problem, for the rest of us.

Yet, Friedman's real message is not that the world is flat, in the sense that all barriers to trade and competition have been demolished. Although competition has taken on new forms as it has become simpler to provide services and goods across long distances, the more fundamental change he sees is a different one. It is the way in which world supply chains of information, money and goods now tie nations together in a far deeper way than old-fashioned trade links ever could.

Oddly, Friedman says little about several of the main drivers that are behind this change. One is the emergence of English as a world business language. Another is cheap and easy air travel, without which the web would never have become as important as it has. Another is the lowering, but not removal, of barriers to the movement of money around the world.

In addition, *The World is Flat* is intended for a general audience and has no references, reading list or footnotes. (It is a fair bet that he is familiar with the work of Manuel Castells although, to declare an interest, Castells and this reviewer have co-authored a book.) Instead the tale is told journalist-style, through the medium of people Friedman has met. Thus the reader might well form the impression that Friedman himself coined the term Glocalization, which he uses for the way in which cultures operate in a world setting. In fact the term was first used by Roland Robertson (University of Aberdeen, UK) in 1992, and he has been

responsible for developing the concept and spreading the term's use, although Robertson agrees that Erik Swyngedouw, now at Oxford, began using the term at about the same time.

Despite these problems, Friedman writes interestingly about the ability of a range of societies and cultures to cope in the flattened world. Many Muslim societies find it difficult to be open and meritocratic and are not likely to prosper in a world where a high level of personal mobility is key to success. This applies especially to the Middle East where many Islamic states have the added curse of substantial mineral wealth. Friedman is an expert on the Middle East, as author of the widely-read *From Beirut to Jerusalem*, and writes interestingly about this.

As he says, cultures which do not allow personal development are likely to be unsuccessful. But as he also points out, countries such as India have many successful Muslim businesses. So does the UK, where many are led by women. It is fine to have strong belief systems in a society. Only when countries allow the precepts of a particular religion to dominate their political systems does progress becomes impossible. Here Friedman is right to mention Saudi Arabia, but the case of stem cell research in the US is just as topical. Indeed, his logic suggests that the US would do better to strengthen its laws separating church from state than to allow its current leaders to try to think of ways around them.

This is only one of the hummocks impeding the clear view across Friedman's flat world. Another is the fact that millions of people are disconnected from the systems that make up this world and on present form have little chance of joining it. These are the denizens of what Castells calls the Fourth World, separated from the fast-changing planet around them by poverty or isolation. Although a tragically high percentage of them are Africans, there are fourth-worlders aplenty in any world city. To Friedman this is virtually a footnote, mentioned only late in the book, but from the point of view of human progress it is a vital issue.

It is also possible that Friedman overstates the flatness of the modern world. Communism may have vanished from most of the former Soviet empire, but it has not been replaced by capitalism as it is practised in London or Los Angeles. Instead, Russia itself is a place where commercial law happens at gunpoint and contracts are a matter of might rather than right.

At the same time, existing institutions that ought to be dinosaurs in the flat world might just turn out to be tougher than he thinks. He praises new web-based news gathering methods for their speed and directness. Get a digital camcorder and a laptop, and in theory you can be a broadcaster just like CBS. But despite the hype, anyone working in these new media would swap their job in a minute for Friedman's *New York Times* column, or a similar pulpit on the BBC or in the *Financial Times*. Indeed, being noted in these traditional media is the blogger's real aim in life. In the UK, the BBC website is the best-used source of online news precisely because it has far more trust than new and unknown online-only media.

There might be even more strenuous objections to the sheer size of Friedman's claims. He describes the global supply chains that deliver goods across the planet beautifully, using the ordering, design, construction and delivery of his own new Dell laptop as an example. It is a tale that crosses the US, Malaysia, Taiwan and other countries and builds other firms, such as Samsung and Intel, into the Dell net, along with China Airlines and UPS, whose job it was to get the computer into Freidman's hands. His belief is that these networks are a powerful blow for world peace. Countries that have such minute-by-minute economic relations cannot go to war.

But he forgets that politics has a way of trumping economics. It was economic madness for West Germany to absorb East Germany, but it did it anyway, and is still paying the bills. And if things did go badly wrong, it is not impossible to imagine Dell deciding that it might make more sense to shorten and simplify its supply lines.

Indeed, the flaws in the just-in-time world have been made painfully apparent in the past few years by British experience with blockades of the oil distribution system by tax protesters. It took only a few days for national chaos to ensue, in a chain of events which worried the government more than anything in recent times except the Iraq war. In a world where the motorway, or the sky, is the warehouse, systems are fragile. They are built on the assumption that everything works and that nobody goes on strike.

It might also be unwise to assume that skilled professionals will always be available in Asia or Mexico for a few hundred dollars a month instead of the thousands that their colleagues in Europe or north America ask for. Recent media reports suggest that research and data centres in Asia cost up to half as much to run as their rich-world equivalents, and that inflation has been rapid. While this still means higher profits, it does not suggest a permanent way of doing business cheaply and easily. And a large oil shock might cause a rethink of a world economic system in which international transport and travel are regarded as essentially free goods.

But if Friedman has overstated his case, it is hard to argue with some of his policy recommendations. And perhaps they apply with even more force in the EU, where millions of new citizens in the accession states are ambitious for western Europe's standard of living, than to the US.

His prescription is a simple one. It starts with education, especially in science and engineering. It continues with a plea for cultures and beliefs that expand the mind to defeat those that restrict it. He calls this 11/9 versus 9/11. How many readers of this review know what 11/9 was? He means the fall of the Berlin Wall on 9 November 1989, which he regards as a triumph for humanity just as the more familiar 9/11 was a defeat. He also counsels against panic reactions, even to 9/11, that hand easy victories to the enemies of pluralism. His message is an upbeat one which deserves to be heard even if the detail is not quite as simple as he makes out.

Martin Ince

London, UK

Storytelling in Organizations: Why Storytelling is Transforming 21st Century Organizations and Management

John Seely Brown, Stephen Denning, Katalina Groh and Laurence Prusak

Burlington, MA, USA and Oxford, UK, Elsevier Butterworth-Heinemann, 2005, xiii + 192 pp., AU$46.50, ISBN 0-7506-7820-8 pbk

This book explores 'the thought that narrative has substantial practical value in organizations for dealing with many of the principal challenges facing managers and leaders today' (p. xii). This seems to be a reasonable proposition, especially when it is put forward by four leading and persuasive thinkers as Seely Brown, Denning, Groh and Prusak. They are all international figures in their own right.

Seely Brown is a former director of research at Xerox's Palo Alto Research Center (PARC) and co-author, with Paul Duguid, of the acclaimed book *The Social Life of Information*.[1] Denning was formerly Program Director for Knowledge Management at the World Bank, Groh is a writer and producer of independent films and Prusak was formerly with IBM Global Services. In fact, all the authors, with the exception of Groh, claim the status of 'independent consultant'. The label 'consultant' suggests that they have a story to tell and it is best to keep this in mind when thinking about this book. It is presented in a narrative style and is directed at a managerial audience rather than an academic one.

The origins of the book go back to preparations for an April 2001 symposium on organizational storytelling organized by The Smithsonian Associates in Washington, DC. As told in the preface by Denning, the four authors discovered that they had reached the same point via different routes, independently of each other. Each had noticed the surprising importance and pervasiveness of narrative and storytelling in their respective settings. Rather than seeing it as frivolous and ephemeral, they were not prepared to dismiss it. They all believed that storytelling would play a greater practical role in organizational life in the future. The result is a moderate length book with its six chapters 'assembled' by the four authors rather than written as a seamless web. The contributions of the different authors are clearly identified throughout. Chapter 1 is in four parts where each author separately explains how they 'got into storytelling'. Chapters 2–5 contain the original 2001 presentations by Prusak, Seely Brown, Denning and Groh, respectively. In each of these chapters, authors also reflect on what they presented in 2001 and how they see it differently in 2004. The final chapter, Chapter 6, is a conclusion by Denning under the title 'The Role of Narrative in Organizations'.

The Preface by Denning sets up the rationale for the book, its genesis and what it hopes to achieve. This is in large part descriptive and makes the point that storytelling is starting to appear in the management literature and is even appearing as an academic topic in some universities. Denning makes no mention that knowledge management probably had the same trajectory. However, he does make the point that by promoting narrative he is not abandoning analysis. In fact, he seems to use the word analysis interchangeably with science. He says 'We're trying to bridge the distance between science and narrative and still retain the value of both. Our aspiration is a marriage of narrative and analysis' (p. xii). For this reviewer, it is a laudable objective, but one that is not actually realized in the book. The reconciliation of these two ideas would be a far greater task than the scope of the book itself.

The description that each author gives in Chapter 1 of how they arrive at storytelling is interesting if one reads between the lines as there are allusions to some of the disciplinary areas that inform this eclectic endeavour. For example, Prusak admits interest in cultural history and the transmission of social norms. He also points to the desirability of knowing who knows what and how people know how to behave in organizations. Prusak seems to have been influenced by the work of economist Deirdre McCloskey who argued that 28% of the gross national product (GNP) in the United States could be accounted for by persuasion. Seely Brown's trajectory is somewhat different and recounts a situation where he had to confront the limitations of problem solving using theoretical mathematics and computer science, the disciplines in which he was originally trained. Seely Brown claims that he has learnt to work with the world a little more and one can gather this means supplementing scientific and technological knowledge with knowledge from other

domains. He refers to Latour's use of the term *bricolage* or working with what is at hand. A meeting with film maker George Lucas also was important for Seely Brown since it impressed on him that complex ideas can be best told using stories. Denning's reflections are not as well developed as the other two as he recounts that his awareness of storytelling started to grow when he discovered that the technique helped him to promote organizational change agendas as part of his job, largely within the World Bank. Groh for her part is also brief, reflecting on her family background which emphasized storytelling and her 'learning-on-the job' from the collaborative process of making films. Chapter 1 presents with a conversational style which is effective in that readers may be able to identify similar defining moments in their thinking or work life that led them to think differently.

Chapter 2, Prusak's original contribution, is a descriptive chapter in that it is largely categorical and touches the different functions of narrative within the organization. Prusak is at pains here to show that there are different categories of stories that play different roles. Some of the categories that he identifies are stories about: other people; the work itself; the organization; the past; the future; change; and identity. This array of topics is supplemented by a discussion of the roles of such stories in promoting social bonding, sense-making and stimulating change. In addition, Prusak reminds us that storytelling can operate in electronic domains via telecommuting and web communities. There are also sometimes gendered and generational dimensions to stories. Prusak's reflections three years on are interesting. He makes some sensible observations: that as knowledge becomes important, so too will stories; stories can be told by 'artifacts'; computers deliver a triumph of content over context; and some stories transfer social knowledge. He also remarks positively about the knowledge management movement that 'When you have an intellectual movement, which is tied to really large macro forces, it's not going to fail' (p. 49). Prusak may be a shade optimistic about the promise of knowledge management. The rising tide does not need to raise every hulk in the sea.

Readers familiar with Seely Brown's book *The Social Life of Information* will recognize many themes from that work appearing in Chapter 3. Seely Brown is concerned with tacit knowledge as a social phenomenon and environments that foster productive inquiry. His experience in companies provides a good basis for several of the stories he tells and it is refreshing to see attempts to describe knowledge in a work context, actually how it is used. Information technology is also never too far away from Seely Brown's thoughts (I guess this reflects his background) and one gets a strong sense that he remains a real optimist in this area, even if progress is likely to be incremental. In his reflections, Seely Brown raises the difference between knowledge clusters and knowledge ecology. For Seely Brown, the difference is that ecology not only has connotations of a living and growing organic system but also the cross fertilization of ideas. He points to the growth of innovation ecologies in India, Malaysia and China as analogous to what happened in Silicon Valley. Seely Brown makes two further reflections that are worthy of note: the important value of narrative as a coordination mechanism for the corporation; and the possibility of the narrative approach threatening dominant organizational cultures which emphasize process and structure. While these latter two points are worthy of further development readers will need to discern for themselves in what instances narrative could be a 'two-edged sword' in the hands of power.

Chapter 4, by Stephen Denning, is titled 'Using Narrative as a Tool for Change'. Denning uses this chapter to tell of the changes in the World Bank from 1996 to 2000. He recounts how the World Bank grappled with the concept of an

enterprise-wide knowledge management programme from a point in 1996 where there was virtually no knowledge management to 'Four years later in 2000, all of those things had been put in place in the World Bank' (p. 100). He tells of how the World Bank transformed itself from a lending organization to a knowledge bank. Narrative, and its successful management, played a key role in all of this he argues. For this reviewer, such accounts have too much of a self-serving justification to be taken seriously. There is no mention here of Stiglitz's fall from grace in the World Bank as a Vice-President nor of the institutional power struggles that represented what was at stake by trying to bring about change. Rather Denning is intent on making the point that not only is narrative a powerful tool for change but that there is also important practical knowledge associated with its telling. Some of his suggestions include the following: that the story must be true; it must be told in a minimalist fashion; it must have a happy ending; the storyteller must believe; narrative and analysis need to be married; and, the storyteller has to let go of control. One is left with a sort of list of how to be a better storyteller. For example, Denning says on page 122 that telling a story with an unhappy ending such as the one about 'That company that went bankrupt because it didn't implement knowledge management!' produces a poor result. Rather, if a happy ending is chosen, the human limbic system kicks in to provide an 'endogenous opiate reward' for the human brain. This provides for a more receptive listener. Denning's remark is telling, not because of its contribution to understanding knowledge management but rather because of its insight into his approach to being an independent consultant. If that was all there was to knowledge management it would be easy. Three years on, Denning believes that narrative is widening, deepening and growing in importance within organizations. He gives short shrift to the limits of storytelling's effectiveness saying that while there are differences in cultures 'the deeper message is that stories flourish everywhere' (p. 133).

Groh's Chapter 5 tells about storytelling in making educational videos. This is an interesting chapter in that Groh looks at storytelling from the perspective of her job, making films. Storytelling is equally important for Groh as it is for the other contributors. However, for Groh it is part of what she does, part of her being, when she makes a film. One does not get that impression from Denning as narrative seems more distant, something that is to be manipulated for a purpose. Groh makes the point that in film-making a narrative has to be distilled and it has to make a point, a difference. This is a good point that has eluded many aspirants in electronic commerce as they struggled to identify the value proposition in their business models. Three years on, Groh makes the point that her film-making has benefited from listening to the stories of her customers, surely not a new point but one that suggests that there may be value in understanding the market from different perspectives.

The final chapter of the book is written by Denning and has the title 'The Role of Narrative in Organizations'. This is a concluding chapter and he plays the role of the commentator at a conference who is asked to make sense of the disparate themes from various sessions. In this chapter, Denning recapitulates why storytelling plays such a central place in organizations today. He also looks backward as to why storytelling was not recognized earlier; sideways at the growing academic recognition of narrative; and forward to where narrative might be leading in the future. This is a fairly straight-forward summary chapter, containing many dot-points. Given Denning's interests, it is not surprising that he sees the future involving three elements: narrative becoming a core competence of organizational

leaders; the emergence of narrative as a set of tools; and narrative enhancing visions of leadership.

While this book presents an interesting topic, this reviewer has some reservations about how well the four authors manage to rise above what is effectively an assembly of chapters. Their intention to highlight the importance and potential of storytelling in organizations has led to a book that has its own story to tell. However, the influence of the 'independent consultant' means it is not free of distortion. Some readers looking for a more even-handed approach may find the book disappointing in this regard. Having said this, the chapters are referenced well enough to give readers enough leads to follow topics in greater depth. One of the shortcomings of the book is its uncritical appreciation of knowledge management. Denning and Prusak are particularly inclined to leave the impression that storytelling's future lies within the ambit of knowledge management. Is storytelling the next management fad? Another shortcoming is the fact that power is not squarely addressed. For these authors storytelling has its place in a rather traditional management discourse where ultimately management uses stories to lead the way for the workers. There is no mention of a critical perspective here, nor of Foucault. Will storytelling be the hallmark of the learning organization? It's hard to imagine that it is not already, but then which story is being told? One wonders how this book would have been different if the authors had engaged with each other to aim for something that was more seamless. Having to share their knowledge and make some sense of it may have impressed on the authors the inherent difficulty of the task. It may have led to a book that was a little more reserved about the potential of storytelling and narrative.

Notes and References

1. John Seely Brown and Paul Dugid, *The Social Life of Information*, Harvard Business School Press, Boston, MA, 2000.

Richard Joseph

Murdoch University, Australia

Understanding Industrial and Corporate Change

Giovanni Dosi, David J. Teece and Josef Chytry (Eds)

Oxford, Oxford University Press, 2005, xx + 419 pp., £26, ISBN 0-19-926942-4 pbk

The guidance provided by the book reviews editor of this journal encourages reviewers to focus on a number of key issues (as well as gently discouraging digressions and other *faux pas*). In reading a book for review, then, we are prompted to think about the potential audience or purchaser; the organization of the material and authorial expression; and the 'nature, content and purpose' of the text. In this review, I would like to address these issues in reverse order, beginning with what I consider to be the most important in deciding whether to buy this book, or recommend it to students or a librarian, the nature, content and purpose. The organization of the material is dealt with along the way, and the potential audience or purchaser is discussed towards the end of the review.

At first glance, the nature and content of the volume are relatively clear; the editors set out their rationale for publishing a collection of 13 previously published papers in terms of celebrating 10 years of the journal *Industrial and Corporate Change* (Oxford University Press), drawing on work published between 1992 and 2000. They write of the need to illustrate the contribution that has been made in the pages of the journal, and encourage interested readers to engage with future issues of the journal. The substantive content of the book is a selection of papers, which are presented in two categories; first comes 'Economic behaviours and organizational forms', followed by 'Knowledge, organizations, and technological evolution'. The editors provide a concise introduction to the volume, and it is exceptionally well-indexed, enabling readers to move rapidly to specific areas of interest.

The collection is organized, the editors write, according to the contributions that their authors have made to two fields. The first, forming the umbrella under which the six papers of the first part shelter, is defined by the interplay of individual (organizational) behaviours with the structures and boundaries of economic organizations. More precisely, the editors suggest that they are re-presenting a selection of papers that challenge conceptions of economic agency as one-dimensionally rational (that is, oriented towards maximization or equilibrium). Essentially these are conceptual papers, designed to carry arguments forward or provide ideas to test in subsequent empirical work. The second common thread, linking the other seven reprinted papers, is two-part: the remaining papers are more 'inductive' and historical, focusing very much on the 'co-evolution' of technological knowledge and organizational forms.

The primary challenge for the authors (Radner; Postrel and Rumelt; Cohen and colleagues; Williamson; Aoki; Greenwald and Stiglitz) in the first section, then, seems to be delineating the bounds of rationality if we accept that economic agents are (a) *not* 'olympian', (b) *not* cognitively or behaviourally mechanical, and (c) obliged to make decisions framed by issues such as organizational structure and power. In particular, a number of the papers are designed to address the seminal work of Herbert Simon in this field, published in 1955.[1] Given the pivotal importance of Simon's work, such extended and imaginative interpretations of it are very welcome. Radner, Postrel and Rumelt, and Cohen and colleagues in particular are willing to challenge and extend the notion of bounded rationality in relation to decision making and organizational actions.

Throughout this first section all of the contributors range widely, theoretically and methodologically. Thanks to the breadth of the journal remit and the editorial board members' interests, the papers (and therefore the journal as an institution) provide a sense of the potential of this approach, towards deepening our understanding of industrial and corporate change. In sum, they all contribute to academic and public knowledge of the longitudinal processes and conditions that our everyday organizational actions are embedded within.

This project, of opening up the conjunction of economic theory and organizational behaviour, is echoed in the second part of the collection by attempts to open up processes of technological change or development. Comprising seven papers by a wide variety of authors (Cowan and colleagues; Levinthal; Pavitt; Rosenberg; David; Winter; Chandler), this section addresses the role of technological knowledge in stimulating or constraining change. Issues raised by these papers include the nature of knowledge itself, the boundaries between tacit, articulated and codified knowledge, and the process of codification. These seven papers are more classically 'historical', in the sense that the writers analyse their

chosen topic systematically through time, tracing conceptual discussions and exploring particular contexts. Levinthal, for example, examines wireless communication, from telegraphy to radiotelephony and broadcasting, alluding briefly to contemporary cellular/mobile telephony. As well as providing an inherently interesting empirical context, this approach allows Levinthal simultaneously to introduce his theoretical framework and support his adventurous arguments. Other authors contributing take a similar approach to historical changes in both practice and theory.

Finally then we come to the purpose of this collection. Many of the authors are extremely eminent in their fields, having made major contributions to the development of theory and policy in a national and even global context; most have been recognized by their peers and external institutions as leaders of contemporary thought. Yet each of the 13 articles has already been published in an easily accessible form; the re-presentation is as close to identical as the editors could manage; and the editors' introduction is short and descriptive. So the volume is not intended as a new contribution to any debates. The editors, as outlined above, do not make clear why they felt it necessary to collect these papers; this leaves us with speculation. It appears that the volume is intended to achieve a number of aims: first, towards academic readers, to display the journal to those unfamiliar with its remit and content. In this, the book is a success almost by definition—it increases the visibility of the journal and will allow readers unfamiliar with it to sample the published work. Second, towards previous and potential authors of journal papers, to display what the editors consider to be the most influential papers published so far and the level of debate they wish contributors to attend to. Again, in this the collection may be judged a success—the papers are impressive in many ways and indicate that the journal has been able to attract work from preeminent scholars. Third, towards general readers (policy, practitioner, or some hybrid of academic and non-academic), to emphasize that the journal is not only concerned with theoretical issues, but provides analysis and understanding that can help to (re)shape what we do or how we do things. In this final aim, the book is perhaps less successful; while the production is of the highest quality, in that the book is beautifully laid out, printed and bound, it is somewhat uninviting as a structure for presenting often dense theoretical work. Neither the surviving authors of the articles nor the editors provide any framing of the individual papers, meaning that the only reflection comes in the introduction to the collection. It may have been more engaging had the editors been able to persuade those authors who are able to reflect on their published work from where they currently stand, and to indicate how the theory or analysis has been developed since publication. Such an approach would have had the added advantage of encouraging the authors to locate their work, which is after all historically oriented, within the narrative flow of theory development that the articles contribute to. It might also have encouraged the editors to reflect on the selection process, which is entirely opaque.

The collection then can be recommended as an introduction to the first decade of the journal's content, and might form a useful if rather eclectic introduction to debates in the area. It would perhaps be useful in a library that does not subscribe to the journal, and could provide advanced undergraduate or postgraduate students with some stimulating material to work with. Beyond these rather limited uses, it is difficult to construct a convincing rationale for purchasing this book.

Notes and References

1. H. Simon, 'A behavioural model of rational choice', *Quarterly Journal of Economics*, 69, 1955, pp. 99–118.

Scott Taylor

Birmingham Business School, University of Birmingham, UK

Social Theory and Philosophy for Information Systems

John Mingers and Leslie Willcocks (Eds)

Chichester, UK, John Wiley and Sons, 2004, xv + 455 pp., US$75.00, ISBN 0-470-85117-1 hbk

This edited book represents a rather useful addition to the impressive and growing list of books in the Wiley Series in Information Systems. It is not only impressive in terms of the contributors, all reputable information systems scholars, but also in terms of the breadth of topics covered. The editors themselves are well established in the information systems field. John Mingers is a professor of operations research and information systems from the University of Kent and Leslie Willcocks is a professor of information management at the Warwick Business School, Warwick University, UK. They state in the preface that the readers they had in mind for this book were experienced information systems (IS) academics and researchers who had little knowledge of the subject matter of a particular chapter. The book therefore aims to introduce aspects of social theory and philosophy to readers that 'should be able to acquire sufficient knowledge to judge whether the approach will be useful to them, and then be able to go into the literature to discover more' (p. xv). Several principles explicitly guided the work: authors had to be involved in IS as well as being experts in the theory they were writing about; each chapter had to have a narrow focus of just one or two thinkers, covering the subject in depth as well as criticisms and limitations; and, each chapter had to be seen as a resource, providing guidance to relevant literature. Of course, such a book cannot hope to cover the full range of thinkers of relevance to IS. The result has been a rather large and theory-laden work covering a selection of themes: Allen Lee introduces thinking about social theory and philosophy; M. Lynne Markus discusses functionalism and neofunctionalism; Introna and Ilharco write on phenomenology; Myers addresses hermeneutics; Stephen Probert writes on Adorno; Klein and Huynh address Habermas; Willcocks introduces Foucault; Jones, Orlikowski and Munir write on structuration theory; Howcroft, Mitev and Wilson discuss the social shaping of technology approach; Mingers deals with critical realism; and Merali looks at complexity.

This book has no formal chapter that serves as an introduction, explicitly linking the specific themes of the different chapters. Rather, the first chapter by Allen Lee serves this purpose in a more abstract way. Lee's chapter differs from those that follow in that it addresses the broad themes of the book: philosophy; social theory; and, information systems. He approaches these themes with a personal account of how his thinking changed over time. Lee makes the observation that many of his IS colleagues are entrenched in their thinking about philosophy. They 'appear unwilling to acknowledge and accept philosophy as seriously as they do their own

information systems research literature' (p. 2). Lee talks about taking a philosophical attitude which is 'not so much about an accretion of one's knowledge as it is a change in meaning of one's own knowledge and even knowledge in general' (p. 2). For Lee, three insights changed his thinking about his IS knowledge: Hume's problem of induction; Gödel's proof; and the discrediting of logical positivism. Incidentally, Hume discredited the inductive belief that it's logically possible to reason from the particular to the general; Gödel showed that axioms were not a rigorous basis for all mathematics, hence undermining logical positivism; and logical positivism refers to widely accepted scientific tenets of objective observation and empirical verification. Lee writes that '[These insights] … all eventually taught me that, in order to become a scholar, I needed to shift the focus of my study, if only occasionally, away from the objects typically examined by the natural and social sciences and instead towards scholarly knowledge itself as the object of inquiry. I have come to regard philosophy as being this kind of study' (p. 5). Lee provides a lengthy appendix on Hume's contribution to the understanding of induction and draws on Schön's classic, *The Reflective Practitioner*, to discuss the shortcomings of positivism. In addition, Lee explains differences between the terms ontology, epistemology, methodology and method. The result is a rather accessible chapter about why researchers should question their own prejudices. The most challenging part of Lee's chapter comes towards the end where he questions why so many IS researchers remain committed to a positivistic approach to their discipline. Lee suggests that many IS researchers not only lack knowledge about alternatives to positivism but face sanctions for acquiring and using such knowledge. The socialization process faced by young IS researchers is observed to be a major obstacle to broadening thinking. What is less evident is how philosophy and social theory (as explained in the chapters that follow) will bring about the desired changes in this socialization process. Many IS researchers remain blissfully unaware of the many devastating accounts of positivism.

The chapters that follow can be seen as largely self-contained expositions of theory, each with an objective of making this theory relevant to IS. There is some recognition to identifying explicit links between chapters although it appears that contributors are not overly concerned with critiquing or reflecting on other chapters. Having said this, some chapters sit more comfortably with others. For example, Markus in Chapter 2 discusses the functionalism of Talcott Parsons and its evolution into neofunctionalism. The grand functionalist theories explaining the links between individuals, culture and society are associated by Markus to Giddens' structuration theory which is addressed in Chapter 8. Likewise, phenomenology (Chapter 3) and hermeneutics (Chapter 4) are sufficiently similar to share common interests. The chapter on phenomenology by Introna and Ilharco distinguishes itself by the demonstration of theory in practice. Specifically, the phenomenological method is applied to 'screens' (such as TV screens or computer screens) and this provides readers with a first-hand account of what IS research can uncover from this perspective. Introna and Ilharco argue that phenomenology should not be seen within a subjectivist paradigm where attempts are made to understand participants' perspectives and views of social realities. Rather, they argue that meaning is not an idiosyncratic 'inner' domain but an objective public domain of necessary relations or references. For them, phenomenology provides a 'radical answer to the ongoing ideological standoff between a sort of positive naturalism, which argues for general objective accounts of the world as directly given through our observations, and an interpretive approach, which argues for the importance

of ongoing socially shared, subjective meaning' (p. 57). One wonders how die-hard IS positivists would react to the assertion by Introna and Ilharco that the theory-making of positivism proceeds 'to cloak the world with all sorts of theoretical meanings divorced from any sense of actuality—leading many to describe the theory of information systems as irrelevant and meaningless, divorced of practice' (p. 94). Michael Myers' chapter on hermeneutics uses his own work of an interpretive case study of the failed implementation of a centralized payroll system for the New Zealand Education Department. Myers believes that hermeneutics can do much to promote understanding of information systems from a philosophical level by exposing contradictory interpretations of historical events. He goes further to suggest that the future lies with 'critical hermeneutics', aimed at changing reality rather than merely interpreting it. Stephen Probert tries to come to terms with Adorno's critical theory in Chapter 5. This is a theoretical chapter and as Probert admits, reading Adorno is not easy. Probert believes that critical IS researchers should 'embrace what ought to be when analysing what "is", in order to better understand what is actually occurring with IS development and use today' (p. 151).

Chapters 6 and 7 (together over 140 pages) address Habermas and Foucault respectively. Given the breadth of these two scholars, the authors do well to summarize the main historical threads of each and their relevance to IS research, mainly through secondary literature. These two chapters are well placed, setting up almost a dialogue between the two thinkers. Chapter 8 on structuration theory faces a similar problem. Structuration theory proposes that structure and human agency should be understood as a mutually constitutive dualism bridging the gap between the naturalistic positivism of functionalism and the interpretive-subjectivist tradition of phenomenology. The chapter aims to locate the relevance of Giddens' structuration theory to IS research, within the broader context of his much wider output. Again, the contributors use secondary sources to show relevance. Chapter 9 introduces the social shaping of technology with some very comprehensive references to key terms (e.g. translation, symmetry, actants) that followers of Actor Network Theory (ANT) will be familiar with. Mingers' Chapter 10 on critical realism draws on the work of Bhaskar. This chapter is directed at critiquing positivism and attempts to bridge some of the ideas in other chapters. The final chapter of the book, Chapter 11 by Merali, focuses on complexity emphasizing the systems dimension of IS. In this chapter the distinction between a classical information systems paradigm and that of complexity science is articulated.

All the chapters provide a guide to further reading (almost like one sees in some undergraduate text books) and an extensive list of references. This wealth of further reading thoughtfully collected in the one place makes this book very useful, but it is a book that is not for everyone. It is directed at a high-level audience of researchers and research students and is not for the faint-hearted. Just how well this book will attract an audience wider than those who have already 'self-selected' because they realize that positivistic approaches to IS research are limited, is difficult to say. Even more doubtful is whether the book will 'convert' wavering traditionalists, let alone those who are true believers of the positivistic approach to IS.

Some will be disappointed that other thinkers are not included as subjects in this volume. Chapters on information economics and history would have been useful additions to this book. Interestingly (or perhaps alarmingly), economics does not figure explicitly in the chapters nor rate a mention in the index. One wonders why this discipline seems to fall outside the purview of philosophy and social theory. Despite these shortcomings, this book does live up to the claim of its

dustcover: it provides a vital, accessible and critically authoritative narrative on the relevance of these modes of thinking to information systems research. Readers will have to make their own connections between the different chapters. They will also have to make up their own minds on the relative merit of the different approaches.

Richard Joseph

Murdoch University, Australia

Recapturing Technology for Education: Keeping Tomorrow in Today's Classrooms

Mark Gura and Bernard Percy

Lanham, MD, Scarecrow Education, 2005, xiv + 179 pp., UK£17.99, ISBN 1-57886-109-8 pbk

Mark Gura and Bernard Percy believe that technology revitalizes 'tired schools by offering a far broader platform of opportunities with which to engage students' but 'the effort to tap it has hardly begun in earnest' (p. vi). They describe the purpose of their book as being 'to keep the educational technology discussion moving forward in a final push for the breakthrough that will surely follow' (p. vii) and maintain that 'academia is the last remaining institution to keep 21st-century technology at arm's length' (cover notes). The book is in part a long polemic, with occasional compelling arguments about why those who refuse technology for the classroom are wrong to do so. The authors revisit some of the popular misconceptions 'popularized and legitimized' by the 'self-styled experts who have grabbed a good deal of attention for themselves by promoting them' (p. 93). They offer numerous suggestions about how 'technology'—or rather the information communications aspects of technology, since it is only with ICT that they concern themselves—can be used in the classroom. The book is a useful, if somewhat haphazard, catalogue of web-based learning applications and resources. Yet, disappointingly, it is also filled with generalizations about the dinosaur nature of schools, teachers and their supervisors who feel threatened by technology, 'or at the least, disquieted and uncomfortable' (p. 95), and who do not yet 'have a clear understanding of what is possible with the technology and how to make it happen' (p. vii). But Gura and Percy themselves provide little in the way of a cohesive attempt to explore and examine the basis for such assertions.

During the late 1990s, the City of New York launched 'Project Smart Schools' to inject over $100 million during a five-year period, to 'almost overnight get the school system up to speed with technology' following 'quantities of worried feedback from parent groups and concerned citizens that the schools were out of step' (p. vii). Midway through the project's first year, the responsibility for curriculum and instructional support and professional development was reassigned to the Division of Instructional Support, which, 'overnight' was charged with the training and support of some 25,000 teachers in 400 schools (p. vii). This further expanded to include all 80,000 teachers in 1,200 schools (p. viii). At that time, Mark Gura was a director of the programme at the Office of Instructional Technology. He uses his firsthand experience to observe that 'teachers simply weren't using the computers' and despite all the 'obvious fixes—professional development, software acquisition, dissemination of best practices' (p. viii) the project failed to make the hoped for impact. At no time does he consider that the project may have failed, not because

of antediluvian attitudes towards technology, but rather, because of poor management and the 'overnight' massive increase in the scale of the project. Gura admits nonetheless, that there were 'deep pockets of successful use of computers' (p. viii).

Among some of the reasons for low-technology use in schools, the authors describe a kind of change fatigue, whereby innovations, innovative ideas and philosophies are 'constantly shopped and dabbled in by the people in our schools, [but] they either lack stickiness or are co-opted by the culture of status-quo maintenance that prevails in the world of schooling' (p. 2). Thus technology is yet another example 'in the seemingly endless parade of new ideas, philosophies and practices that are embraced, processed and ultimately passed over by teachers and those who supervise them' (p. 2). They cite the 'perceived need to train teachers to use computers' (p. 3) coupled with the belief that 'as the pre-technology cohort of teachers retires and is replaced with people who use computers comfortably, one would expect that the adoption of the computer as a teaching and learning resource would have become popular'. But, they maintain, it has not, primarily because 'understanding how to operate a computer and seeing its advantages for structuring and delivering instruction are two vastly different things' (p. 3). They maintain that 'the fuel for what teachers and students do all day' is generated by 'universities, sometimes by state and local education departments, and very frequently by commercial providers'. This means that 'teachers who may see the value of technology as a powerful support for teaching and learning are often left with the task of creating that curriculum themselves, something that they are most often incapable of or unwilling to do' (p. 4). And because 'schools have traditionally thought of computers as an extra, not a core, mission-critical resource in the delivering of instruction, software developers have avoided sinking development funds into software that would be considered primary materials for teachers' (p. 5). With regard to teachers, they point to the misapprehension that 'technology is a separate discipline, a discrete content' (p. 5), that technology is 'too hard to learn' (p. 6) or, when installed, is seen as 'too valuable to risk taking out of the closet', and teachers are 'intimidated by its presence' (p. 11). It is quite conceivable that such broad assertions do little, if anything, to win over teachers and influence technology integration in schools.

Gura and Percy assert that 'children's understanding of the world in which they live must include knowledge that has been prepared for and deposited digitally on the Web' (p. 14). They recommend the Internet as 'the greatest depository of knowledge the human race has ever assembled' (p. 15). This is both naive and over-optimistic. It makes no attempt to distinguish between 'knowledge' and information; nor of the complex difficulties that arise in searching the Internet, where increasingly, the sheer volume of information is limiting accessibility. Much later in the book, Gura and Percy do admit to a 'growing Mount Everest of content and resources' (p. 132). Their suggestion is for a metasite, or 'home-base clearinghouse where all of the wonderful free resources can be listed, sorted, reviewed and recommended' (p. 131). But they make no recommendations as to which body should be responsible for setting up and operating such a clearinghouse.

Chapter 2, 'What's at Stake?' is peppered with Gura and Percy's observations about the ways in which various curriculum areas and subjects can benefit from technology. The basis for their recommendations is their assertion that 'our youngsters are not learning as we wish they would largely because we have not done what it takes to engage them and have not provided the tools needed to succeed once engaged' (p. 19). They argue that reading can be 'facilitated or enhanced by the

use of technology as a resource' (p. 19) for example, through websites that 'illustrate the mechanisms of phonemes and phonics' (p. 20), electronic flash cards that drill on basics, and utilities such as online dictionaries and thesauri, and software engines such as Achieve3000 (www.achieve300.com) that 'will take any text and prepare the reading material to meet the reading level of each student' (p. 20). Maths can be enhanced through such sites as Math-Kitecture (www.math-kitecture.org) where students and teachers can learn how to 'design functional living and working spaces and to create drawings that illustrate them' (p. 80). For geography there are sites such as National Geographic Xpeditions (www.nationalgeographic.com/xpeditions) and for art, Crayola (www.crayola.com) which shows how to create pointillist art in the style of Seurat (p. 23). They fail to state that using such sites and resources will in most cases comprise two, at most three lessons within a unit of work.

The constant push for technology in schools in Gura and Percy's book sits uneasily with some recent research. Thomas Fuchs and Ludger Woessmann's[1] paper to the Royal Economic Society's annual conference was reported by the *Daily Telegraph*[2] and elsewhere, as evidence that 'computers may contribute nothing to pupils' skills in maths and literacy'. Fuchs and Woessmann's research is interesting because they maintain that they were able to 'control extensively for family background and school characteristics', determining from this that 'the evidence so far does not suggest that computers have a substantial impact on the economic and educational outcome of individuals, neither in terms of worker wages nor in terms of student learning'. And Glover *et al.*,[3] in a paper examining the use of interactive whiteboards (IAW) say that 'in terms of learning and understanding the overall pupil reaction suggests that the IAW made no difference to their experience'. Furthermore, that 'teachers who do not have access to an IAW are using the greatest variety of teaching approaches'. Gura and Percy themselves appear to have made little, if any attempt, to draw on current research to find out how real teachers are incorporating technology into their classrooms. For example, as long ago as 1999, a study carried out for the National Centre for Education Statistics indicated that 'approximately half of the public school teachers who had computers or the Internet available in their schools used them for classroom instruction'.[4] And a more recent study by Douglas Levin and Sousan Arafeh of the American Institutes for Research states, in its summary of findings, that in fact 'school administrators—and not teachers—set the tone for Internet use at school'.[5] One American primary school teacher I questioned was emphatic that 'technology is huge, children start taking computer classes in the 1st grade, with real emphasis by 3rd grade'; and 'most people in education are dependent on the computer and highly value it, both personally and professionally. It would be very difficult to do the job without it'. The sweeping assertions made by Gura and Percy are not backed up by evidence, and their bibliography is scant for a book that purports to have its finger on the current state of technology adoption in schools.

Perhaps one of the most glaring omissions in Gura and Percy's book—and this is difficult to comprehend, given that both have strong backgrounds in education—is their failure to give any consideration to the impact of the US government's re-authorization, in January 2002, of the 1965 Elementary and Secondary Education Act. Now known as 'No Child Left Behind' (NCLB), the Act strengthens the federal pressure on all states to pursue a standards-based reform agenda.[6] The Act requires schools to create high quality standards, and to put into place annual assessments and systems of accountability to ensure that all children

are being educated to these standards.[7] It is particularly concerned about schools in areas of deprivation and schools where there are high numbers of minority students. The NCES study[8] highlighted that 'among those with technology in their schools, teachers in low minority and low poverty schools were generally more likely than teachers in high minority and high poverty schools to use computers or the Internet'. Gura and Percy touch fleetingly on the issue when they write that the greatest worth of technology 'will be displayed in its ability to reestablish learning as part of the lives of disaffected youngsters in our inner cities' (p. 99), but this is as far as they go.

There is no national curriculum in the US. Department of Education officials are 'prohibited from exercising any direction, supervision, or control over the curriculum of instruction, administration, or personnel of any educational institution'. Instead, these responsibilities are handled by 'communities, as well as by public and private organizations'.[9] In the circumstances, it seems particularly unfair that the finger of blame for failure to adopt technology should be pointed at individuals, and at individual teachers. Gura and Percy do, however, acknowledge that greater links need to be forged between public and private bodies, and they agree that 'parents, school boards, and the general public see the prominence and power of technology throughout our society and want young people to have this as part of their education' (p. 116).

As an advocate for technology, the book does not put its own best foot forward. It has not been rigorously edited: many of the chapters are repetitive; a chapter on higher education seems out of place in the context of the primary and secondary school emphasis in the rest of the book; and it is hard to understand why, after some of the bold concluding sentiments at the end of Chapter 8, 'Dream Big', there is a further chapter, on 'Eleven Ways Technology Reinvigorates Learning', the final sentence of which—and end of the book—is simply a reminder that students need to have an 'understanding of plagiarism and intellectual property' (p. 166). There will certainly be those who may dismiss the book on the basis that structure of education in Britain and other countries is so very different from that in America that the findings cannot possibly hold any real relevance to particular situations. Even so, lessons could perhaps be taken but for the fact that there is insufficient school-level analysis to enable the reader to decide whether Gura and Percy's claims about the failure to adopt and integrate technology are justified. The book is a reasonably good guide to some of the wealth of resources and applications that exist for greater ICT inclusion in classrooms and lessons. As an effective and useful analysis of the current state of ICT in the classroom, its negative tone and criticisms leave a sour taste, as much as they leave the deeper issues unexplored.

Notes and References

1. T. Fuchs and L. Woessmann, 'Computers and student learning: bivariate and multivariate evidence on the availability and use of computers at home and at school', CESIFO Working Paper no. 1321, 2004.
2. 'Pupils make more progress in 3Rs without aid of computers', *Daily Telegraph*, 21 March 2005.
3. D. Glover, D. Miller and D. Averis, 'Panacea or prop: the role of the interactive whiteboard in improving teaching effectiveness', *10th International Congress of Mathematics Education*, Copenhagen, 2004.
4. National Center for Education Statistics, *Teachers' Tools for the 21st Century: A Report on Teachers' Use of Technology*, US Department of Education, Office of Educational Research and Improvement, 2000.

5. D. Levin and S. Arafeh, *The Digital Disconnect: The Widening Gap between Internet-savvy Students and their Schools*, Pew Internet and American Life, Washington, DC, 2002.
6. Edsource, available at www.edsource.org.edu_esea.cfm#esea, accessed 7 April 2005.
7. US Department of Education, 2005. Email reply to a posted question.
8. NCES, *op. cit.*
9. US Department of Education, *op. cit.*

Suzanne Mieczkowska

Newton Abbot, Devon