Book Reviews

Social Intelligence: The New Science of Human Relationships

Daniel Goleman

London, Hutchinson, 2006, 416 pp., UK£20, ISBN 978-0091799434 hbk

It is easy to be cynical about this book, so let us clear the air before proceeding. In the prologue, Daniel Goleman notes that this text was written as a 'companion volume' to his bestselling *Emotional Intelligence*.[1] Since its publication in 1995 this earlier book has sold over five million copies worldwide and spawned its own consulting industry around what is 'affectionately' known as 'EQ'. A quick search on Google would suggest that the consulting sector is still riding the wave of interest in 'emotional intelligence', with scores of companies offering EQ workshops, EQ teaching certification, EQ consulting, and EQ assessments. As with emotional intelligence, Goleman is not the creator of the concept of 'social intelligence', though to be fair, the book sleeve speaks of a 'synthesis', albeit a 'groundbreaking synthesis' (from the book sleeve) of research on human relationships.

But who is the readership or intended readership of *Social Intelligence*? A glance at Amazon reveals those that have viewed *Social Intelligence*, have also viewed *Emotional Intelligence*, so no surprises there. The style of the narrative certainly suggests a lay rather than a scholarly audience, and despite the breadth of the text, which attempts to embrace human relationships in the family, in love partnerships, in society, and in business, it is in this last area that there is likely to be far the biggest readership. Given the scope of the book, it is also worth elaborating on why it may be of interest to the readership of *Prometheus*. Social organisation and social networks have long been of interest to the diffusion and development of science,[2] the innovation process,[3] and the diffusion of innovation.[4] Much of this work has focused on network roles, membership, and configuration, whilst relatively little attention has been placed on the skills and competences required to build and nurture social networks. However, over the last couple of years there has been an emerging interest within business for the mapping of social networks, using tools such as social network analysis (SNA), and for promoting the use of 'social media', such as blogs, wikis, and podcasting, to help build and nurture work-related social networks and 'communities of practice'. It is in this specific area that Goleman's book has potential relevance and application.

So, what is *Social Intelligence* really about? The book opens with an introduction to what is termed 'social neuroscience', essentially a blend of psychology and neuroscience, that allows for the observation of the 'neural mechanics' in social interactions using MRI scans of the brain. Very early on, Goleman (p. 4) states that 'Neuroscience has discovered that our brain's very design makes it *sociable*'. Such scans apparently show that the social circuits in our brain navigate us subconsciously through every social encounter, guiding our snap decisions, and sensing the feelings of others; our innate empathy is demonstrated through the observation of similar areas of the brain 'firing' when we either experience an emotion or witness an emotion in others, such as happiness or sadness. Goleman likens this to an 'emotional contagion' and argues that such emotional transactions in our everyday lives are fundamental drivers in what he terms the 'emotional economy'. Interestingly, whilst Goleman argues that we are 'wired to connect', this book does not present an argument for 'nature over nurture'. Employing evidence from 'social neuroscience' and 'social epigenetics', Goleman argues that our social interactions both shape and reshape our brain and regulate our genomic on–off switches. In this sense he argues that 'To a surprising extent, then, our relationships mold not just our experience but our biology … nourishing relationships have a beneficial impact on health, while toxic ones can act like slow poison in our bodies' (p. 5). In Chapter 6, Goleman lists the components of social intelligence. These he divides into (1) 'social awareness', incorporating 'primal empathy', 'attunement', 'empathic accuracy', and 'social cognition'; and (2) 'social facility', embracing 'synchrony', 'self presentation', 'influence', and 'concern' for others. We will not detail these individual dimensions, but it is important to note that Goleman argues that all of these can be improved upon through the honing of the experiences of life and training—well there's a surprise!

Clearly, Goleman is taken with this emerging field of 'social neuroscience'. He is also taken by its potential for understanding and solving a wide array of social problems in our modern, fragmented, and disconnected world. The sleeve note asks 'Is there a way to raise our children to be happy? What is the basis of a nourishing marriage? How can business leaders and teachers inspire the best in those they lead and teach? How can groups divided by prejudice and hatred come to live together in peace?'. *And*, the sleeve note continues, 'The answers to these questions may not be as elusive as we once thought'. To be sure, the book doesn't provide the answers to these questions. It doesn't come close. But then to be fair, this text is more about an exploration of the possibilities for social neuroscience, as well as a kind of naive rallying call to solve the ills of our 'emotional economy'.

Given the intended readership, it is not surprising then that the scholarly work referenced (both science and social science) does not drive or dominate the discussion. These references are appropriately, for this type of book, detailed in the endnotes for each chapter. The Prologue provides a very good introduction to the text, but you have to wait until Chapter 6, a further 70 pages, before you really get a full outline of Goleman's version of the concept of social intelligence. Each chapter is comprised of a number of sections collated around rather loose themes. Many, if not the majority, of the chapter sections seem to read in the style of *Tales of the City*;[5] perhaps written to be read as a daily dose on the tube to or from work, they are short, self-contained vignettes and anecdotes, each followed by 'the science bit'. Whilst this has the benefit of making the material more accessible and digestible, it makes for frustrating reading when attempting to gain a holistic sense

of the book, as a reviewer might do, for instance. Furthermore, the stop–start patter of the text caused by the abruptness of the start of each section [for example, 'Two women, complete strangers, had just watched a harrowing documentary …' (p. 21), 'Picture a mother holding a baby' (p. 35), and 'A head on collision left her car crumpled like a piece of paper' (p. 57)], together with the frequent lack of introductions and conclusions or linking passages, make this a very disjointed and thus disorientating text to read.

Whilst the subtitle for this text is *The New Science of Human Relationships*, this seems to us more than a little misleading, depending of course, where you draw the line between science and social science. There is, for example, much reference to work from social and developmental psychology (e.g. the 'Attachment Theory' of Bowlby), and even a sprinkling of philosophy (e.g. Levinas).

This book will surely play a major role in the popularisation and diffusion of the social intelligence concept. Should that concern us? Possibly, yes, since despite the contempt articulated by Goleman for a conceptualisation of social intelligence that eliminates human values and 'devolves into the pragmatics of influence of control' (p. 101), this is quite likely where the concept is heading. After all, one potential danger of the appropriation of concepts such as emotional intelligence and social intelligence by corporations is that this could lead to a rapid extension of what is termed 'emotional labour' by sociologists[6] or 'emotion work' by work psychologists.[7] 'Emotional labour' refers to the managing and regulation of employee emotions as part of the expectation of undertaking their organisational role—this is already common in the service sector. A key issue in 'emotion work' is the effort required for individual employees to manage their emotional display in their roles, and the consequent dissonance that emerges between this required display and the actual emotions that are 'felt'.

You will not walk away from this text with a set of 'How tos' or 'Tools' for the evaluation of an individual's social intelligence, or 'SQ', as the shorthand will no doubt become, nor will you leave with a clear sense of the implications for training and organisational culture if you are to be one of many business practitioners or consultants that read this book. We assume, as with *Emotional Intelligence*, you will have to wait a couple of years for the sequel for that.[8] However, the book does raise the profile of the social and emotional domains in contributing to our own wellbeing and that of those with whom we interact; in an age of managerialism, individualism, consumerism, and cynicism, this has to be a good thing.

Although it would normally be disingenuous to suggest dipping into a text, the style of this book encourages it, and so a shortcut to deciding whether this book speaks to you is to read the *Prologue: Unveiling a New Science, Chapter 6: What is Social Intelligence*, and *Chapter 19: The Sweet Spot for Achievement*.

Notes and References

1. Daniel Goleman, *Emotional Intelligence*, Bantam Books, New York, 1995.
2. Diana Crane, *Invisible Colleges: Diffusion of Knowledge in Scientific Communities*, University of Chicago Press, Chicago, 1972.
3. T. Burns and G. Stalker, *The Management of Innovation*, Tavistock Publications, London, 1961; T. Allen, *Managing the Flow of Technology: Technology Transfer and the Dissemination of Technological Information within the R&D Organization*, MIT Press, Cambridge, MA, 1977; R. Kanter, *The Change Masters: Corporate Entrepreneurs at Work*, Unwin Hyman, London, 1985.
4. Everett Rogers, *The Diffusion of Innovations*, Free Press, New York, 1962.

5. Armistead Maupin, *Tales of the City*, Corgi Books, Reading, England, 1980.
6. Arlie Russell Hochschild, *The Managed Heart: Commercialization of Human Feeling*, University of California Press, Berkeley, CA, 1983.
7. D. Zapf, 'Emotion work and psychological well-being: a review of the literature and some conceptual considerations', *Human Resource Management Review*, 12, 2000, pp. 237–68.
8. Daniel Goleman, *Working with Emotional Intelligence*, Bantam Books, New York, 1998.

Steve Conway
University of Leicester School of Management
Leicester, UK
and
Annilee Game
Norwich Business School, University of East Anglia
Norwich, UK

Think, Play, Do: Technology, Innovation and Organization

Mark Dodgson, David Gann and Ammon Salter

Oxford, UK, Oxford University Press, 2005, xx + 254 pp., AU$69.95, ISBN 019268096 pbk

Think, Play, Do is a book about the innovation process. The authors are all recognized internationally as leading academics in the study of innovation and they claim that between them they have 60 years spent on its examination. The credentials of this book are further supported by some 20 'dignitaries' who all have written short, paragraph-like statements complimenting the work which appear at the beginning of the book. Included in these is Chris Freeman from Sussex University who notes that 'I found this book very refreshing, and original, because of the way it intersperses numerous fascinating examples from the "real world" of firms, industry, science, engineering and design, with more thoughtful reflection and analysis of the whole process of innovation'. *Think, Play, Do* has something to live up to and for this reviewer, reading it has been a largely positive experience.

The central themes of this book can be found summarized in its preface. The book opens with the assertion that something profound is happening to the innovation process. If organizations and individuals want to become more innovative, or if governments what to increase innovative activity, then a better appreciation of these changes is essential. The authors put forward what they claim to be some very bold and novel assertions. First, they identify a new category of technology, called 'innovation technology' (IvT), which is being applied to and changing the innovation process. Second, they claim that the use of this technology, when combined with appropriately supportive organization and skills, can lead to the intensification of innovation. Third, they observe that the contemporary innovation process can be characterized by a new schema of 'thinking', 'playing' and 'doing'. This schema breaks away from traditional labels often associated with innovation (e.g. research, development and engineering) and highlights the importance of design and prototyping. Finally, they claim that the successful implementation of innovation technology depends upon the development and use of a range of new 'craft skills' and new forms of usually product-based organization.

Innovation technology is underpinned by the power and speed of information and communication technology. So for example, thinking is facilitated by technologies that support e-science or cyber science, where virtual research communities are created to share and combine information through data searching (e.g. by grid computing and artificial intelligence). Playing is facilitated by simulation, modeling and visualization technologies which can build on existing technology platforms such as computer aided design (CAD) and virtual reality. Doing is facilitated by rapid proto-typing technologies, which build upon existing design and manufacturing systems.

The *think, play, do* schema is closely associated with the desire of the authors to reconceptualize the innovation process. The authors note that traditional approaches to innovation emphasize inputs (e.g. R&D expenditure) and outputs (e.g. patents and new products). What the *think, play, do* schema does is allow greater attention to be directed towards 'the flow of connected and iterative activities that turn inputs into outputs' (p. 2). They also note that the thinking, playing and doing activities that are central to the innovation process occur at all stages of this process. Hence the schema overcomes the inherent linearity implicit in many views of innovation. The authors also claim that the schema better captures the importance of design and prototyping.

This approach to the innovation process and the role played by innovation tech-nology is justified through evidence from a wide variety of case studies. Included here are the innovation activities of two large multinationals, two engineering services companies and examples of new product development (including cameras, fashion and Formula 1 racing). A number of other interesting examples are identified, including the projects that prevented the Leaning Tower of Pisa from collapsing and the Millennium Bridge in London from wobbling.

The book has eight chapters and is well supported by a comprehensive index, together with a useful reference section and glossary. Chapter 1 is titled Innovation Technology and its purpose, as might be surmised, is to introduce the notion of Innovation Technology (IvT). In this chapter the authors distinguish between three generic technologies: information and communication technology (ICT); opera-tions and manufacturing technology (OMT); and IvT itself. ICT is described as an enabling technology through its provision of infrastructure, storage and transfer of information. OMT is described as the technology for implementing innovation because of its role in the production and coordination of transforming inputs into outputs. IvT is described as the technology for creating innovation as it assists people in their innovation tasks. The intersection of these three generic technolo-gies leads to the intensification of innovation. This chapter makes the very valid point that innovation is not only risky but it is carried out in an environment of uncertainty. Contributing to this uncertainty are many factors such as market and technical uncertainty; social, cultural and political uncertainties; and the uncertain-ties of time, speed and complexity. The chapter concludes by noting that the management of these uncertainties is enhanced by the use of IvT as organizations can become 'smarter' at innovating.

Chapter 2 is titled Understanding Innovation and provides a well written and well balanced theoretical foundation for the book. Three themes about innova-tion are pursued in this chapter: its historical nature; the role of relationships and interdependencies; and the social mediation of innovation. This chapter aims to show that IvT fits well with the description of the innovation process described in this chapter. The authors point out that IvT compliments rather than replaces the human craft, ingenuity and skills that are central to the innovation process.

Chapter 3 presents in-depth case studies of two companies that have benefited from IvT as part of their strategies: the consumer products company Procter and Gamble; and the professional services company, Arup. While both companies are largely different, the chapter aims to point to commonalities where IvT plays a role. The point is made that embodied knowledge and expertise are important elements of the innovation process for both companies and IvT plays its role in intensifying the contribution of knowledge and expertise to innovation. The chapter includes the observation that 'technology and organization coexist in innovation: they are two sides of the same coin'.

Chapters 4, 5 and 6 deal with Think, Play and Do, respectively. Chapter 4, Think, examines the broad context on which increased thinking occurs and includes the expanded education and research systems and extensive internationalization and collaboration. The focus is very much on thinking as it relates to science and research but the authors note that thinking can occur throughout the innovation process. This chapter includes a discussion on the role of instrumentation on scientific discovery, the 'thinking' infrastructure provided by grid computing, data mining and modeling. There are two case studies presented in the chapter: the approach to innovation by a large drug company, GlaxoSmithKline, and the search for a solution to traffic congestion in London. The chapter makes the point that IvT provides new opportunities to think—by providing new tools, new synergies and the possibility of breaking down institutional and disciplinary boundaries.

Chapter 5 is the chapter on play. In this chapter, play is associated closely with the notions of design and prototyping. It is that set of activities which links thinking to doing in the innovation process. Playing invariably involves selecting. The chapter includes an interesting section on the practice of design and links this to a number of activities such as 'playing' with models, 'playing' with technology, 'playing' with simulations and 'playing' with users. A number of case studies are provided here to show that IvT plays a role in the design process. Finding a solution to save the Leaning Tower of Pisa and Polaroid's prototyping process for a new digital camera are included here as examples. The chapter makes the point that IvT brings together different facets of design and problem-solving and enhances the craft of designers and engineers.

Doing is addressed in Chapter 6. In this chapter it is argued that IvT connects the option-creating activities of thinking to the selection activities of playing with doing—putting chosen ideas into practice. The tools and techniques involved in doing are looked at from both an innovation and a production perspective. One of the case studies presented in this chapter is the shift from mass to lean production (i.e. Fordism to Toyotaism). This highlights the role of standardization and the modularity of products and how this in turn influences the organization and integration of workflow. A number of other case studies point to the role of IvT in the production process.

Chapter 7 is titled The Strategic Management of Innovation. It focuses on the sorts of challenges that managers will face in their attempts to produce results quickly and efficiently from the innovation process. The discussion in this chapter is far reaching and essentially develops the line that the impact of IvT on strategic management will require a reassessment of competencies, or rather the way resources are combined to create value and competitiveness, and capabilities, or rather the factors that provide the potential to recombine competencies to meet new challenges through innovation. These factors include: integrating across

boundaries; organizing internal structures and processes; and learning, creativity and knowledge. The authors note that 'When it is used effectively …, IvT becomes the most important technological tool for the strategic management of innovation ever to have emerged' (p. 187).

Chapter 8, A New Innovation Process, provides a summary of the key arguments in the book. This chapter also enters into discussion on how IvT intensifies the innovation process and the management and public policy challenges it presents. There is also discussion on the new types of craft skills that will characterize innovation processes. The impact on innovation research is also addressed briefly, with the observation being made that in the future, research emphasis will need to be placed on the innovation process itself rather than its inputs, outputs and outcomes.

Think, Play, Do makes a valuable contribution to our understanding of the innovation process and how this process itself has changed. The numerous case studies also help to make the schema credible and supported by evidence. However, for this reviewer, *Think, Play, Do* makes a stronger case for arguing that IvT intensifies the process of innovation. Just how well it provides insight into the 'connected and iterative activities that turn inputs into outputs' is a little more debatable. While the authors value IvT because it 'increases opportunities for innovation by adding to the set of possible technological outcomes' (p. 3), readers should take heed of the authors' admissions that 'innovation, is and will remain, a socially determined and hence unpredictable process' (p. 3). They even go further to say that 'routinized innovation will remain an oxymoron. Craft skills should complement and build upon and never be replaced by the opportunities provided by the automated codes of the new IvT' (p. 25). These are significant caveats on the argument but unfortunately, in the rush to establish a strong case for IvT, are only alluded to in the book. This is indeed, not so much a failing, but an opportunity missed. I recall a remark by the famous evolutionary scholar, Kenneth Boulding, who said that if the computer had been around in Copernicus's day, the Copernican Revolution might not have happened. The same observation may be applied here. What paths were not taken? What questions were never asked? What fields of inquiry never opened up? In sum, in an uncertain environment (such as that in the innovative process), what price do we have to pay for efficiency?

Richard Joseph
Kalamunda, Western Australia
© 2007 Richard Joseph

Treading Lightly

Karl-Erik Sveiby and Tex Skuthorpe

Crows Nest, NSW, Allen & Unwin, 2006, xxi + 262 pp., £18.99, ISBN 174114874X pbk

What if a management writer, professor of knowledge management and its economics, the creator of the 'Intangible Assets Monitor' (a well-known methodology for the accounting of intangible assets), writes about an apparent Utopia? Some are bound to deplore the vainness of the pursuit, some may be fascinated, and others, who consider that the managing of knowledge is a Utopian subject, will neither be exceedingly surprised nor concerned. But I was taken aback.

Born out of an exchange of pleasantries at a management event in 1999:

'What is the word for knowledge in your Aboriginal language?'

'We don't have a word for it' (p. xv),

Treading Lightly is Sveiby's intellectual journey into what is considered one of the world's most ancient cultures, that of the pre-European Australian Aboriginals, seen through the lore of the Nhunggabarra community of New South Wales.

It is a story of 'respect' and discovery, of trust and being led towards an insider's knowledge through storytelling; it is a story about the responsibility associated with knowledge. In Sveiby's innovative venture, the knowledge management paradigm leaves the organisation—where it is still identified by many with technological infrastructure—and is applied instead to anthropology, to reveal that knowledge is about people, and that the ancient Nhunggabarra people had long ago developed the economy of intangibles, which Westerners are just starting to envisage in the twenty-first century. We are confronted with the need to reflect and question. To reflect on lessons learned: sustainability achieved through a holistic approach to life. To consider by-products of the journey: frameworks for leadership and learner-driven education. And an open question: is the 'innovation economy' just illusion and recklessness?

The book could be read in a matter of hours: Sveiby uses a pleasant, unpretentious writing style; however lightly expressed, though, the scheme of the book is complex and develops on several layers—as any knowledge-based organisational analysis would—covering the people, process and technological aspects of the Nhunggabarra knowledge ecology.

Narration follows a physical journey through the sacred places in Nhuggal country in New South Wales, and is supported by Nhunggabarra stories illustrated through paintings by Tex Skuthorpe—inspiration for, and co-author of, the book—and frequent citations out of the first European settlers' journals.

The physical journey mirrors the intellectual one, consciously building up a context for the stories, the anecdotes and the author's deductions, in an attempt to cope with the inadequacy of the written medium in conveying the rich background necessary to make sense of the Nhunggabarra tradition. Without such background—as Sveiby realised through testing the Nhunggabarra stories on an unaware sample of master students—very little of the intended meaning is actually conveyed to the listener.

Cognitive psychologists have postulated the existence of frames, schemas or stereotypes, developed through lifelong socialisation, which drive our interpretation of the meaning of narratives. This applies to the Nhunggabarra stories within the book as well as to the book itself. Acculturated within a Western environment, I struggled against the temptation to see *Treading Lightly* as the story of a paradise lost: the Golden Age of the Australian Aboriginals collapses with the arrival of the Europeans, who—in self-fulfilment of the Biblical prophecy—throw away their paradise and are condemned to toil on earth for a meagre crop of food at enormous expense of resources, human and natural.

Sveiby is conscious of creating tension between fascination and incredulity in the reader: throughout the book, he recognises that the Western mind may find it hard to believe some of his more contentious points (as an example, that the Nhunggabarra probably always lived in peace). Also, he has been very careful in

providing research notes, references and sources: almost one fifth of the book covers background information.

Although balanced and enjoyable, the book has a strong component of eco- and ethical values, particularly in the last chapter, 'Sustain Our World!' where the author takes a position that may excite strong feelings.

So, what is it that we should learn from the Nhunggabarra? Sveiby tells us that the Nhunggabarra society was sustainable before the arrival of the European settlers, it had existed for tens of thousands of years, and this was the result of a 'knowledge economy': demand was high for services (stories, dances and ceremonies to incorporate and transmit the culture) and low for material goods.

Australia—because of its geographical location and meteorological conditions—is subject to flood and fire; therefore, accumulating wares was not seen as a profitable business. The Nhunggabarra codified this message in the story of Muuboop the artisan owl, who refuses to trade his goods with Baaloo, the moon. Muuboop's refusal makes Baaloo envious and angry: she seeks revenge. During the period of rainfall, when it is Muuboop's turn to ask a favour, namely for hospitality in Baaloo's hut, she denies it, so that Muuboop's cherished goods are eventually lost in the floods. The lesson rings a relevant note in the contemporary context, where the unpredictability of meteorological conditions is becoming a threat for several countries: should we be concentrating on developing cross-cultural relationships—the intangible asset—rather than production of tangible goods? Sveiby cites the European Union as a worth-following example in valuing and cultivating the intangible asset of community building.

On the basis that they have achieved a sustainable economy, while the Western world still has not settled on one than seems to work, Sveiby implies that the Australian Aboriginal culture is more advanced than we might wish to believe. However, he sees some hope of sustainability for the West in that its economy has become increasingly intangible since the 1960s: the stock market testifies this increased influence of intangible factors on value creation.

To develop his point, Sveiby compares what he calls 'Aboriginal intangible discoveries'—the tenets of Nhunggabarra culture—with 'Western world innovations'; these range from the technique of hypnosis through context-specific leadership, life-long learning and gender equality to the space–time continuum concept, covering social values, religion and science (or pseudo science). The space–time continuum for example was introduced in the West by Einstein in 1905, but had apparently always existed for the Nhunggabarra, who neither made a distinction between time and space in the language, nor felt the need to frame past, present and future in a sequential, irreversible structure.

Such a view of space and time links directly into the Nhunggabarra understanding of innovation: nothing is ever invented; rather, discoveries are made of something that has always existed. The Nhunggabarra were wary of the consequences of introducing changes that might affect the ecosystem, thus individual genius was restrained by collective consensus. They have been innovative, but not biased in favour of innovation as the contemporary Western culture has—according to Sveiby—been demonstrated to be, their strong sense of responsibility towards the mandate to 'keep all alive' providing a balancing force.

In this context, nature was studied to enhance her intrinsic ways, and not to impose changes whose consequences might be unpredictable. For example, instead of selection of the best seeds of cereal to improve crop yield, we are told

that the Aboriginals chose a method of harvesting that makes the most of all the available seeds. Despite tens of thousands of years of intervention on the Australian landscape by the Aboriginals, or rather as a result of their mindfulness—Sveiby observes—the first Europeans were under the wrong impression that what they observed was wild nature, unaffected by man's technology.

Sveiby and Skuthorpe describe the Nhunggabarra culture as highly sophisticated: the spiritual, the physical and the law all worked together coherently, such a system having developed over a long time span thanks to exceptional leadership skills. Assuming that a retrospective interpretation of this kind can be accurate—Sveiby says—analysing the models that underpin success (a success that is increasingly being recognised by archaeologists) certainly provides useful frameworks of reference for our society, despite the differences in context and assumptions, these last growing smaller as the knowledge economy and a culture of intangibles take root and develop.

Leadership in context, with every member of the community skilled and empowered in their own role and achieving status for their competence, is a shared characteristic of the ancient Nhunggabarra society and of the contemporary knowledge workers. Strictly connected to 'knowledge work' is life-long learner-driven education. Sveiby expresses the hope that the next step in the development of Western culture will be a greater sense of responsibility for our actions, as was the case for the Nhunggabarra.

Treading Lightly is the celebration of a people whose culture, through the medium of a storyteller, has deeply affected a knowledge management professor. At the same time, it is a case study on, as well as a business case for, the knowledge management paradigm. Finally, it is a cry for action towards a sustainable society based on personal responsibility.

As the attempt to create a framework to include all his emotional and intellectual concerns in a coherent system, it must have been a fascinating journey for the author. For the reader, who may not share the unique experience of the author's journey, the book provides Dr Sveiby's challenging thoughts and perspective on some of the concerns that should be high on the agenda of world leaders.

Maria Paola Andreoni
Berkhamsted, UK

Perspectives on Free and Open Source Software

Joseph Feller, Brian Fitzgerald, Scott A. Hissam and Karim R. Lakhani (Eds)

Cambridge, MA, MIT Press, 2005, xiii + 538 pp., US$40.00, ISBN 0262062461 cloth

When computing was in its infancy, all software was free and open. Software was tied in to the hardware, and it held no value in the marketplace. In the mid-1960s IBM was required to 'unbundle' its hardware from software, and a decade later the market for software started taking off. The term 'open source' was not ratified until 1998. Now in 2007 we find ourselves looking backwards to a possible future of free and open source software (F/OSS).

Perspectives on Free and Open Source Software consists of a series of essays and asks: what is the status of the F/OSS 'revolution'? Most readers of the book will be familiar

with the term open source but just in case, F/OSS refers to software that can be freely used, modified and distributed on the proviso that all contributors are recognised. The word 'free' here is used in terms of free speech rather than free beer.

Even if you have never heard of F/OSS, you are using it. Sitting behind every Google search you make is a massive complex of servers running on Linux, an open source operating system. The philosophy is that F/OSS is robust because many people read, use and modify code so it is improved. This is Linux's Law, 'given enough eyeballs, every bug is shallow', which is quoted no less than seven times throughout the book (pp. 84, 127, 144, 164, 188, 227, and 327).

The book has excellent navigational tools, it is split into five sections, and each chapter within has an explanatory title. There is some misnumbering in the contents page, but the introduction is comprehensive and gives a summary of each chapter for the reader wishing to dip in. The index is also thorough, and the more than 300 references provide a comprehensive reading list for the topic. The introduction ends with a series of questions grouped into three audience-specific lists; project leaders and developers, managers and business professionals, researchers and analysts. This indicates the type of audience the authors expect to reach, and it is diverse.

The first section, Motivation in Free/Open Source Software Development, asks 'why do they do it?' and consists of three chapters that describe and try to understand the motivations of individuals who participate in F/OSS. The community (in itself a difficult term) is diverse and difficult to define. True to stereotype, the majority of developers are male and young (over 60% are under 26), but with nearly 60% having a serious partner and 17% having at least one child, they are not the loners often associated with programmers.

People who contribute to F/OSS do so to develop new skills, and the majority of these developers (55%) consider they take in more than they contribute. This is despite the high rating of altruistic motivations such as user need. One study concluded that the work gives developers a sense of creativity.

The second section, The Evaluation of Free/Open Source Software Development, asks was it worth it? In a somewhat refreshing move, this book does not act solely as a champion of open source. Robert L. Glass in the first chapter in this section discusses a wide range of claims about F/OSS: 'Let me tell you some of what I dislike about the open source movement' (p. 82). He concludes with an argument for research and hard evidence. Problems with open source are also explored in Brian Fitzgerald's paper. He cites scarcity of developer talent as a problem, and notes that open source runs the risk of being too successful, as commercial imperatives don't agree with the philosophy behind the source.

The book begins to get technical in Chapter 6, which looks at the example of the structure of the Linux development process. Function codes and complex maps abound, but even to my untrained eye it was understandable on second reading. The authors conclude that the Linux ARP code was revealed to be 'poorly documented'—a problem flagged several times throughout the book.

Two chapters ask if F/OSS is 'better' than proprietary software with one coming to the conclusion that rather than being inherently better it only has the *potential* to be better. Weinstock & Hissam (another of the editors) attempt to answer the 'is it better' question by describing a wide study into F/OSS that is split into five open source projects—All Commerce, Apache, Enhydra, NAIS, and Teardrop. The chapter starts off with a list of common myths about open source. The myths are: OSS

must be more reliable because of constant peer review; having source code gives you more control; OSS peer documentation is little support; lots of people are interested in the code; and OSS hackers are mavericks and disorganised. With the exception of a refutation of the last myth, the chapter doesn't give concluding answers—which is a shame.

The third section in the book, Free/Open Source Processes and Tools, consists of three chapters looking at case studies of F/OSS development—Apache and Mozilla, GNOME and FreeBSD. Apache is the 'most widely deployed web server at the time of writing' (p. 164). This is a comprehensive report, and reads like one with questions and hypotheses posed and answered. The project compared the open projects to five commercial projects. The chapter on operating system FreeBSD is helpful because it gives quotes from FreeBSD developers, which are insightful.

GNOME stands for GNU Network Object Model Environment—an attempt to create a free desktop environment for Unix systems. A description of the GNOME Foundation, where the community can have a voice, is included. The foundation communicates information to media and corporations, decision-making is transparent and it acts as a legal entity that can accept donations. The final chapter in this section discusses common practices used in F/OSS development such as having a few pre-determined developers who can commit changes to the version control system. Others submit a 'patch' to be reviewed and discussed by the developers.

The fourth section is for those in the readership with an economic bent. Free/Open Source Software Economic and Business Models addresses the changing relationships between customers and companies, and between companies and competitors in open source business models. This section ranges from an argument that the development of F/OSS parallels that of high performance windsurfing because of a tradition of releasing innovations to the community, to a discussion of the main business models. These are the Distributor, the Software Producer (GPL and non-GPL models) and Third Party Service Provider. The section then goes on to Advantages and Disadvantages of open source and key factors that affect profits.

Paul A. David and Jean-Michelle Dalle have written a very technical and formulae-filled chapter on the allocation of software development resources on open source production. Surprisingly, the final chapter in the section is from Microsoft with a description of its shared source initiative, which is a 'framework not a license' (p. 338), with a comprehensive table addressing frequently asked questions.

Like any reader, I came at this book with a particular perspective—my interest is in opening access to scientific literature and the parallels to the open source community. This meant the final section, Law, Community, and Society fell squarely within my area. It did not disappoint. Lawrence Lessig begins by arguing that the issues of open source and free software are 'at the core of what we mean by an open society'. He follows with a good introduction into the commons, where restrictions imposed on a resource are neutral and general. The chapter gives examples—such as code written to allow DVDs to play on Linux machines being deemed a crime—which illustrate the argument that copyright has become an issue of national security and values of free speech crumble as a result.

Legal issues surrounding FSS licensing are explored in one chapter, which looks at how licenses are designed to work and then asks if they will actually work this way if tested. It also looks at two criticisms of the GNU General Public License (GPL).

Anna Maria Szczepanska and colleagues link the OSS movement to societal changes in the late 1960s. This chapter views the open source community as a social movement and analyses it from a discourse perspective. It is possible these concepts will be very foreign to those coming from an economic or computer science background, but the chapter does explain itself well. Described as 'a way to understand how a collective identity is created, communicated and managed in the form of "webs of meanings"' (p. 433), the chapter offers interesting insight into the issues and arguments that occurred early in the open source movement. These defined what is now considered to be open source. The chapter looks closely at Eric Raymond, a leading figure in the open source movement and president of the Open Source Initiative (also the author of the ubiquitous 'bugs' quote).

One chapter looks at European Commission policy in relation to F/OSS (called libre software in Europe), and identifies points in the EU funding bureaucracy which will deter many F/OSS practitioners. Despite this, there is a desire to create an information society based on open creation and exchange of information and knowledge. The final chapter argues that open source is a paradigm shift similar to the point where IBM opened up its design for other computer manufacturers to clone.

The authors state that they 'wanted this book to bring together, under one roof, provocative and exemplary research and thinking from people within a number of different academic disciplines and industrial contexts' (p. xviii). This goal has certainly been achieved.

In keeping with the open spirit of the movement, the book is available as a free download either as individual chapters, or in its entirety from: http://mitpress.mit.edu/catalog/item/default.asp?ttype=2&tid=10477&mode=toc.

Danny Kingsley
Australian National University
Canberra, Australia

Hypercapitalism: New Media, Language and Social Perceptions of Value

Phil Graham

New York, Peter Lang Publishing, 2005, 202 pp., US$29.95, ISBN 0820462179 pbk

Phil Graham has quickly established a very strong presence in critical discourse studies, largely by focusing on new technologies, particularly new media. His major concerns have been about the way that capitalism adapts its shape to adjust to new technologies, but never alters its telos of appropriating and commodifying for profit. Graham goes one step further to show how powerful contemporary discourses—those of governments and international agencies—are so infused by neo-liberal assumptions, including neo-classical economics, that it is virtually impossible to engage in such discourses without being complicit in an underlying ideology that facilitates postmodern capitalism. Avowedly Marxist, Graham's book is an ambitious and worthwhile project, although, at some crucial points, logic and fact are held together tenuously.

Graham's notion of hypercapitalism is distinguished from that of David Golumbia, Ronald Sukenick, Ruth Colker, and Jeremy Rifkin when he explains the dual

etymology of his usage. The 'hype' refers to the propaganda function of contemporary capitalism's economic claims. However, the 'hyper' also refers to the speed of communication, particularly as it relates to transactions of non-material 'goods' such as currency. His characterisation in Chapter Four, entitled 'Hypercapitalism', provides much that is useful for political economic and sociological theorists. Adapting Marx's *Capital*, Graham distinguishes between systemic capital (form of social organisation, largely dependent on raw physical labour) and phenomenological capital ('"self valorizing things" … deployed in pursuit of surplus value'). Then, using Ernest Mandel's assertion that intellectual labour was subsumed under systemic capital in the first half of the twentieth century, Graham makes the claim that systemic capital 'has continued to extend its reach into every sphere of life' (p. 68). In this new 'knowledge economy', commodities that have little intrinsic value (at least in the period of industrial capitalism, commodities such as washing machines and cars had use value) are now highly valued, purely on the basis of exchange, not use. Now this is a useful elaboration of contemporary political economy. It is consistent with the thrust of Nico Stehr's (2002) *Knowledge and Economic Conduct: The Social Foundations of the Modern Economy*, which posits that the knowledge economy is based on symbolic inputs, rather than the material inputs of an industrial economy. However, it is here that Graham gets rather obscure and, for me, unconvincing, partly because he holds on to not-very-useful bits of Marxism, particularly the notion of dead labour. If he were instead to concentrate on the other aspects that he identifies as characteristic of hypercapitalism—the commodification of education, art, sexuality etc. (p. 75)—then this part of his scholarship would have been more useful. Similarly his foray into the nature of money as having, to quote Marx, 'no limits other than those of the imagination' (p. 78) is less than convincing because it does not negotiate post-Keynesian, post-Friedman theories of money.

This is where I think Graham might have enhanced his fundamental and useful propositions about contemporary capitalism by engaging with other leftist political economists concerned with the same issues. Neo-Marxist, Frank Webster, for example, argues, as Graham does, that the contemporary changes in capitalism do not represent discontinuity, but a mutation from industrial capitalism. Similarly, Christian Fuchs sees this 'restructuration', mediated through cyberspace, in such a way that TNC capitalism still regulates cultural production. John Bellamy Foster and Nicholas Garnham have also interpreted this phenomenon from such a perspective. Yet none of them is considered in this book. Similarly when analysing the bubble phenomenon, Graham does not draw on economists' work. Robert Shiller's *Irrational Exuberance*,[1] for example, might have offered some useful non-Marxist, but critical, insight into the stock market and dot.com bubble phenomena.

The book is on much better ground when Graham does what he is really good at, namely showing how discourse works to implicate us ideologically in talking about the knowledge economy and the new media. This is particularly so in official documents that represent themselves as objective accounts of how governments and capital should operate. Thus, using Hallidayan analysis, as well as Jim Martin's and Jay Lemke's linguistic notions in Chapters Six and Seven, Graham shows how an imperative is created to act quickly to achieve the desired element in the irrealis (the imagined future). These axiologies of policy operate at high levels of abstraction. Nominalising complex processes (e.g. *value-added functions, internationally oriented service industries, employment opportunities*) thematically condenses highly contestable propositions into givens that are repeated mindlessly in the officially

sanctioned discourses of policy documents stipulating appropriate actions in the knowledge economy. An uncritical linguistic analysis would simply characterise such texts as jargon, but Graham shows that it has a real political purpose: to create the conditions that will allow hypercapitalism to appropriate the new technologies and cyberspace for massive commercial gain. Thus, by taking an extract from a New Zealand government document (it could almost have been any government), for example, Graham shows the ludicrous assumptions behind such an apparently innocuous statement as the 'Internet opens up global markets' (p. 145 ff).

Graham has much to offer in applying critical discourse analysis to understand the politics of the new economy. However, he needs to avoid unnecessary globalising statements that ring of polemic, but are deeply questionable propositions. Thus, to say that consistently throughout history, each new communication technology has the 'intended purpose at the time of deployment … [of] social control in the maintenance of a political economic elite' (p. 87) simply overlooks the processes which led to the invention of the printing press, or the telephone, or overland telegraph, or television, or the Internet. In fact, what he really shows well is how capitalism moves to appropriate the means of production (e.g. Murdoch, Gates). His analogy of the allocation of electrospace with the Enclosure laws is a good one. But he is prone to overstate his case given the evidence he provides. For example, couldn't it equally be argued that the production of mobile phones, ipods, PCs, and all the other recent communication technologies are more likely to be driven by old industrial-capitalist motives of developing new consumer products and their attendant services than they are by the motivation of control? In other words, industrial capitalism isn't finished, just sharing space with newer forms of capitalism.

This book is well worth reading for two reasons. By adopting a Marxist position, Graham forces us to confront the ideological assumptions that underpin contemporary capitalism. As well, his thorough and sophisticated discourse analysis provides considerable evidence for other researchers and appropriate methodologies for future research.

Notes and References

1.   Robert Shiller, *Irrational Exuberance*, Princeton University Press, Princeton, NJ, 2005.

Bernard McKenna
University of Queensland Business School
Australia
© 2007 Bernard McKenna