

Book Reviews

Knowledge Policy: Challenges for the 21st Century

Greg Hearn and David Rooney (Eds)

Cheltenham, Edward Elgar, 2008, xv+277 pp., £69.95, ISBN 978-1-84542-186-1 hbk

Matching the complexity of the topic, and perhaps creating more, are these 20 essays by 25 authors of whom three are the editors and 19 are Australian, currently holding Australian posts. All except perhaps one are academics. The work leaves the reader as confused as the editors seem to have been in their search for a *raison d'être*. Or in fact does it reflect a particularly Australian syndrome, a remoteness, whatever the technological ease of communication, from the English speaking knowledge centres of the northern hemisphere? Where is the concept of a knowledge policy going? Is a knowledge policy the span to bridge remoteness? Does not one of the two essays with no mention of the word knowledge—'Employment and innovation in the information economy'—point in a more pertinent direction? Editorial type questions are raised. Why this book? Why these 25 authors? Why include the 20 disparate essays within the one cover? Or is the compilation of this work to be considered as an experiment in policy thinking, as the editors aver in the final essay. Does thinking about knowledge policy take place in a context similar to that in genomics referred to in one essay—'while the complexity always existed, attempts to characterize or study it were frustratingly inadequate'.

Nevertheless, whatever the confusion created by the complexity, the papers raise many conceptual questions causing one to think anew about established ideas and theories. Furthermore, reading something which is different to one's normal train of thought provokes ideas. There is, however, a considerable and fundamental inadequacy pervading the work appearing in the book. Assumptions are made about the significance of the academic sector in the creation of knowledge and as to it being the major and almost sole source of innovation. The word innovation occurs very frequently. It is the justification for conceiving the role of the academic sector to be the main mover and shaker in economic growth through its role in the creation of knowledge. Undoubtedly, these assumptions have been growing in strength in the last couple of decades, and they have been a powerful incentive for governments to invest yet more in the academic sector. Since the Second World

War, the university system has grown exponentially. It is a major sector in all economies and the justification of this growth has been these assumptions. Academics do create much knowledge, especially scientific knowledge, but there are many other factors to be considered in the growth of knowledge and its relationship to the economic system. The assumptions of academia, markedly evident in these essays, have been formed in the face of evidence that innovation is a complex construct of diverse bits of information, flowing through societies and social groups but resulting in innovation only in some of these societies and social groups.

There can be no question but that as one essayist says, 'the economic system grows through the growth of knowledge', but he goes on to say that 'more importantly it grows through the growth of the interactive exchange of information based on the knowledge'. Since the early 1970s there has been an awareness of the significance that an economy is more than a conjunction of capital and labour: it is a conjunction of capital, labour and information but information within particular social contexts. Information is the content of what is said or presented in print, or the quasi-print of the computer screen, generally by one member of a social group to another in the same or to members of a different group in the same society or different society. It bounces around. The awareness of the significance of the bits and the exchanges led, from the early 1970s, to increasing investment in information processing and in the development and use of the technologies of computing and communication. Information and communication technologies became a priority demand of a market in which most economically and socially active people found themselves constantly pursuing yet another piece of information. This pursuit became costly and the need to make it more efficient and effective caused investment to increase yet further. The volume of activity and levels of investment led to the concept that the economy had become an Information Economy, the latest in the waves of innovation, technical progress and economic development, which have characterised Western economies since the agricultural revolution of the eighteenth century. The current downturn in the economies of the developed world would seem to indicate that this information wave is losing its power to create new products, technological processes, new firms which introduce these and therefore new employment.

To understand what may produce a new economic wave to succeed the Information Economy, it is necessary to adopt a broad and holistic view of knowledge, and of the diverse factors which lead to the conversion of knowledge into economic wealth. Some knowledge is created in formal research and other formal investigative activities, and appears formally in papers, books and computer memories. For the most part, however, it is informally created through experience in making and doing things, the experience of one's self and of others from whom one learns through interactive exchange at a personal level. Experiential learning remains the primary source of knowledge and provides the richness of the information exchanged. The academic formally creates knowledge some part of which may be used immediately by a sponsor, a colleague in the discipline or others who may gain access. Much may lie unused perhaps for decades or more, until it is rediscovered or it may never be a factor in creating economic wealth.

That larger proportion of knowledge, gained through experience, is readily passed on to others as information to be more readily and immediately used. Innovation is highly dependent on the input of diverse often random information; random because whilst it may be deliberately sought or given, it may be an accidental event in the course of interaction between people. As an essayist states, the

dynamic is information. The wine bars of Silicon Valley were places in which information was deliberately sought or in which information was randomly flowing. It was formed into ideas and innovation by interaction between people as one bit struck another to produce a spark. It is not merely a matter of 'I never thought of that' but also of the tacitness of most of the information being passed on. The interacting persons have an understanding feel for the technology of the sub-sector in which one or both is working whether aerospace, footwear, pottery, or computer design, and a feel for the technologies which are transforming the sub-sector. Software is the core transforming technology of the Information Economy but it has often been less than efficiently, or effectively, applied. Large projects have too often been conducted by computer specialists without an understanding of, and feel for, the application sub-sector. One has only to be a regular reader of the business supplement of any prominent national newspaper to see that yet another big computer system has failed or design of one abandoned. Innovative development is an inter-active information process requiring tacit understanding of both the transforming technology and the technology of the sub-sector of application.

The other essay without mention of knowledge—'Information society policy'—discusses many aspects of the use, impact and regulation of information and communication technologies. Yet for all the sharing and combination of information sources, Internet and other access to data bases and other stores of information, security and systems which in fact subversively accumulate private data and information, such systems are non-creative. The technologies are formal in their activities. Machines do not act like people in exchanges of information. Innovation remains an output of the social milieu of a place. It occurs in some places and not in others. Some places reach out to find creativity but creative and innovative dynamism is cyclical. Whilst some places enter on such a cycle, others come to the end of their cycle, losing their dynamism. They consolidate, as one essayist has it. They make formal and bureaucratic those structures and activities which informally created the dynamism. Several essayists make these and other points relative to the localised generation of knowledge and the social exchange of information but one essayist focuses in on the global problems such as climate change facing humanity. In his view the local cannot deal with the global. Another in this volume reinforces this view in that life policies, such as environment, water and energy, present dilemmas to society and its modes of governance. It is felt that these are too global for solution by the local generation of knowledge and of information exchange.

They each ignore, however, what happens in the waves of economic and social development which have continually renewed Western economies. These are not driven by 'deliberative governance' but by individuals, energised by their social group, seeing opportunity in fields of rising demand. They and their counterparts in other localities virtually simultaneously seize the opportunities by founding new activities, new firms, based on creation of new products and technologies and services leading to a surge of dynamism in their localities. Others in other localities follow and a new wave of economic and social development renews the social prosperity of the global developed world. The outlook would seem to be that developed societies, and hopefully some less developed ones, will engage in an Environmental Economy to lead the way out of the trough behind the Information Economy. Just as the latter saw the creation of new technologies to meet the demands of the global developed society, so also will an Environmental Economy meet the global demand to counter climate change and solve the life problems of the environment: water and energy and indeed resource depletion more generally. For this to

happen, barriers created by governmental and academic assumptions will need to be replaced by a more holistic view. Knowledge reaches into the economy and society through information exchanges between people who informally at a localised level create new activities and do so autonomously. In this present book none of the participants grasp this characteristic sufficiently: that policy is effective only when the individual autonomous decisions multiply to a surge driving a new wave locally and then in sum globally.

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New Tech, New Ties: How Mobile Communication is Shaping Social Cohesion

Rich Ling

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Rich Ling is already well known in the field of mobile studies for his thoughtful studies and analyses of mobile communication, notably his 2004 *The Mobile Connection*—one of the first full-length studies of the social nature of mobile telephony.¹ A senior researcher for the Norwegian telecommunications company Telenor, Ling also holds an adjunct appointment at the University of Michigan. In this new book he tackles one of the most controversial and often discussed issues regarding mobile communication—how it relates to social cohesion. In doing so, Ling offers an important account of mobiles and the social, one that is not only invaluable in advancing scholarly discussion across the various disciplines involved in investigating mobiles, but one that also makes a significant contribution to our understanding of technology and society in more general terms.

Ling approaches mobile communication from the perspective of ritual interaction. The first half of the book deftly reviews and draws upon theories of ritual interaction and social cohesion. Ling places ICTs and mobiles specifically in the field of tension between ideas of the social, on the one hand, and the individual, on the other (Chapter 2). In the following chapters which constitute the theoretical core of the book, Ling discusses ritual interaction in three key thinkers: Émile Durkheim (Chapter 3), Erving Goffman (Chapter 4), and, less-known, but crucially important to Ling's framework, Randall Collins (Chapter 5). After Durkheim, Ling claims ritual as the 'wellspring of social cohesion' (p. 54). Two issues that arise from Durkheim, however, are whether ritual can be taken more fully into 'the mundane machinations of everyday life' (p. 55), and whether in engendering social cohesion does the 'situation have to be co-present' (p. 56): 'Is there the potential for everyday ritual and is there the opening for mediated ritual?' (p. 56). In order to scale down 'Durkheim's insight [regarding ritual] into a tool for the analysis of telephonic interaction' (p. 57), Ling turns to the work of Erving Goffman, who teaches us to read everyday life as patterned by the small group, the

situation, and the theatre of the interpersonal. Goffman is an abiding figure in mobile studies, and Ling makes good use of his work here as elsewhere. However, what is really novel and persuasive about Ling's theory-building transpires in the third precursor he chooses—the sociologist Randall Collins. From Collins, Ling takes an emphasis on the micro-social situation, and how rituals and symbols do important work in this (especially through Collins' notion of 'interaction ritual chains'). What especially attracts Ling is the possibility of connecting these mundane situations to the general social sphere, with ritual as a catalytic event (Chapter 6).

What unfolds in the second half of the book is a convincing argument about how the everyday interactions of people around and through mobile communications become vital for creating contemporary society through ritual. Ling's central idea is that 'mobile communication allows for the execution of rituals that in turn result in social solidarity' (p. 82). In applying his theory of ritual to mobile communication, Rich works through a series of important topics: co-present interaction (Chapter 7); mediated ritual interaction (Chapter 8); what he terms 'bounded solidarity' (Chapter 9); and, finally, the proposition that mobiles involve the 'recalibration of social cohesion' (Chapter 10). Ling crafts a set of important, interlinked arguments about mobile communication and how it shapes and alters social cohesion. For Ling, the 'mobile phone extends the ritual reach of society beyond co-presence', and accordingly 'extends the reach of parents, children, and friends' (p. 157). Ling's study is another that queries Robert Putnam's pessimistic fears about social capital, and what mediated communication does to it. Such debates over social capital, anomie, and loss of connection have featured the television (contrasted with the telephone), the Internet, and now the mobile.

Yet Ling does not simply question or refute such persistent concerns about technology and the social. He does recognize the ways in which the mobile can be disruptive to everyday rituals, and 'disrupt the flow of the interaction and direct attention elsewhere' (p. 115). Ling persists with trying to precisely delineate and characterize the mobile's social contribution, wrestling with its signature role in the familiar sphere and in the cohesion of small groups:

The mobile telephone is the tool of the intimate sphere ... While generally we must be open to both intimates and strangers when we interact in daily life, the mobile phone tips the balance in the favour of the intimate sphere of friends and family. (p. 159)

Drawing upon Christian Licoppe's notion of 'connected presence', Ling contends that while the 'mobile telephone is not the solution to the diffusion of social interaction ... it does seem to have the potential to connect individuals in ways that are not possible for other technologies' (p. 163). Ultimately Ling's take on such 'bounded solidarity' is not that it illustrates the shift from *Gemeinschaft* to *Gesellschaft*, rather that:

perhaps we are dealing with the legacy of earlier, more communal forms of interaction. These are not as stiff as those defined by the church, the family, and tradition, but they still retain the human touch of social interaction that is a buffer against the other individualistic winds blowing in society. (p. 187)

For the most part, I found Ling's book convincing, however the main thing I wondered was how well his account held up with the transition of the mobile phone into what might be termed mobile media. Here the mediated communication represented by the cellular mobile promises to widen even further—with, for instance, the crossing-over of technologies represented in the idea of mobile television. Ironically here the theories of Durkheim regarding ritual may need to be returned to once more, because of the potential of the mobile to become a new kind of broadcast device—that is not necessarily well captured in the notion that it is the 'small-scale ritual that is more central to the understanding of mobile communication' (p. 92). Already the yoking of the mobile to the Internet that we see in the video-distribution networks of YouTube (video taken on mobile phones virally distributed to millions) takes this technology in another, rather more public direction, something that surely complicates how we approach social cohesion (or lack thereof).

This caveat aside, among the now teeming books on mobile technology crowding the bookstores and libraries, this elegantly written and carefully formulated volume is truly one worth reading. In addition to his solid erudition and ample empirical research, Ling is a subtle observer of the texture and foibles of everyday life, and is a good storyteller. Not only is it a delight to read, *New Tech, New Ties* makes an indispensable contribution to our understanding of the nature of mobile communication, in theorizing what is distinctive about the contribution this technology makes to how society, technology and innovation is evolving today.

Notes and References

1. Rich Ling, *The Mobile Connection: The Cell Phone's Impact on Society*, Elsevier/Morgan Kaufmann, Amsterdam, 2004.

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Patent Failure: How Judges, Bureaucrats, and Lawyers Put Innovators at Risk

James Bessen and Michael J. Meurer

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Patents for invention were originally a Royal Prerogative. There was no common law right to 'property' in one's invention—but the Queen or King could grant a monopoly privilege as part of their Royal Prerogative.¹ Elizabeth I and James VI/I both did so so frequently that parliament intervened with the *Statute of Monopolies 1623*. Many decades later the French revolutionaries developed a 'human rights' charter. Wanting to retain these monopoly privileges they re-framed the concept as 'property'.² Most lawyers now consider patents and copyright as issues of property. This can seem strange from an economic or innovation policy perspective, but the

way in which Bessen and Meurer address this question makes sense from both a legal and an economic perspective.

Their book asks whether the patent system works as a property system. The major issue they raise is whether the boundaries to property granted through patents are sufficiently clear for the system to be effective and efficient. They find substantial evidence of unclear boundaries, and that this puts innovating firms at a high risk of inadvertent infringement. They calculate that for publicly listed US firms (excluding pharmaceutical firms) the probability and cost of infringement litigation is now so high that the net benefit of the US patent system for such firms is negative. As publicly listed firms do 90% of US industrial research and development (R&D), this finding—that the patent system has a negative impact—is of major concern. Because other countries have been rapidly following the US lead on ‘intellectual property’ this is relevant elsewhere.

This book is written for a general audience, so is accessible to those who are put off by the minutiae of legal writing or the theory of economic writing on the patent system. Economists will find the treatment of patent boundaries enlightening; and lawyers (and economists) may be surprised at the range of economic evidence available about the patent system. While told in an accessible manner, the story is backed up by substantial research published elsewhere by the authors. It is extremely readable, and makes good use of specific events as well as summary statistics. It is a ‘must read’ for those with an interest in economic or innovation policy. Given the surprising priority that the European Union places on patent monopolies rather than competition as a major driver of innovation, it is a particularly apposite and timely warning to EU policy makers.

The authors were concerned that patent policy is ‘faith-based’, and were motivated by the growing need for an empirical evidence basis for policy. Beyond their own work, they draw together a range of empirical material to address a very specific question—do patents work as a system of property rights? That is, in the real world of the actual patent system, rather than the academic world of stylised patent models, does the system have integrity and does it then work to promote economic well-being?

They address this question in three main parts. First they review relevant findings from the legal (Chapter 2) and economic (Chapter 3) perspectives on patents. Then they develop evidence on the net private benefit from patents for publicly listed US firms (Chapters 5–7). They add chapters on two special topics—small firms and software patents—before concluding with three chapters setting out reform proposals, particularly the need for far clearer notice of where the boundaries to patented technology lie.

Tangible property ownership provides both rights of use and rights of exclusion; in contrast the patent monopoly provides no *affirmative* right of use, only the *right to exclude* others. This has important practical significance in regard to blocking other innovations, including patented innovations. In exploring the differences they suggest that patent property rights will fail as an efficient incentive system if validity is uncertain; rights are highly fragmented; and boundaries neither clear nor predictable, especially to third parties. Where these conditions are not met, transaction costs will be high, and the economic benefits of property systems do not eventuate. They argue that the implementation details are of central importance in the effectiveness of a patent system, and are highly critical of legal doctrines that obscure important differences between physical and intangible property systems in their practical operation.

In exploring these issues (Chapter 3) they focus in on the ‘notice function’ of property boundaries. If strangers can’t readily tell where the boundaries are, at a reasonable price, there will be a lot of trespass and enforcement costs will be high. Where technology investors cannot determine the boundaries they will be subject to *unavoidable* risks of disputes and litigation, unless they cease innovating. Of course this problem is rather worse in the USA as there is only a very limited independent invention defence to infringement. They give a number of examples to illustrate these boundary problems. These include the famous *Kodak v. Polaroid* case, and their telling of this story provides much information about the lengths Kodak went to not to trespass on Polaroid’s property. Despite these measures, the court did not agree that they had succeeded. Another startling example is a 1985 E-Data patent. In 2001 the US patent appeals court so radically extended the meaning of ‘point of sale’ (well beyond its meaning in 1985) that E-Data were able to extract rents that went well beyond what they had actually invented.

Turning to the economic impact of patent property (Chapter 4) they review four types of research on innovation: historical research on the industrial revolution; statistical studies comparing national economic performance over time; studies of ‘natural’ economic experiments; and a range of other empirical studies, including the Yale and Carnegie-Mellon surveys on appropriability. The evidence they review suggests that patents do play a role in economic growth but that this role is contingent and variable—depending critically on the form of the patent system. While they find that evidence of positive economic effects of patents is limited and contingent, they do not find any evidence that ‘patents uniformly stifle innovation’. Overall they conclude that whether patent policies influence R&D investment is too hard a question to answer empirically. So in the remainder of the book they limit themselves to the narrower question of whether patents provide net positive incentives to innovating firms.

Thus begins the meat of the book. In Chapter 5 they present their research on the private value of patents, locating this within the context of the work done by others. They review the range of existing estimates from patent renewal studies and econometric work on market value. They test these estimates against the real-world outcomes of the 2006 patent auction by Ocean Tomo. The focus is on the value of patents, abstracting from the value of the underlying innovations—that is on above-normal profits (‘rent’). Their findings are a very useful addition to information about the patent system: the global value of patents owned by publicly listed US firms is around two to three times the domestic US value; there are substantial inter-firm differences in values, particularly along industry/technology lines; patents owned by large firms are much more valuable than patents owned by small firms or individuals. Overall they find a striking concentration in ownership of the value from the patent system:

... these estimates suggest that the economic benefits of patents are very highly concentrated among a small number of firms. *Over one-half of the value of worldwide patents accrues to a small number of large pharmaceutical firms*; over two-thirds accrues to firms in the chemical and pharmaceutical industries. (109, emphasis added)

The chapter goes on to provide a context for the estimates of private patent value. The aggregate value of about US\$4.4 billion in 1991 compares to an estimated cost of patent acquisition of just under US\$1 billion. The net domestic value

is around 3% of the value of the corresponding R&D investment. When global values are estimated the proportion rises to 9–18%—confirming that large royalties are extracted from the rest of the world. The chapter concludes with some enlightening estimates of the above-market profits (rents) obtained through use of patents.

Offsetting these benefits are costs due to patent disputes. Chapter 6 looks at the cost of disputes and Chapter 7 looks at why patent litigation rates have risen so sharply since the 1980s. A particular issue investigated is whether defendants in patent cases are ‘thieves’ or unwitting trespassers. They argue that a well functioning property system would work well even in the presence of ‘thieves’, by making it rational not to cheat. Using key examples, and reviewing US litigation, they strongly suggest that most patent litigation involves inadvertent trespass.

The costs of patent litigation involve much more than legal costs. The sad case of Cyrix is analysed to show how an innovating firm can win a patent case, but lose the commercial battle because of the length of time of legal proceedings and the market uncertainties this creates. Drawing on their own earlier research the authors use stock market event studies to show that patent dispute announcements reduce the stock market value of both parties, and that this value is not recovered when the dispute ends. They develop a time series estimate of total litigation losses from 1984 to 1999, showing separately the series for pharmaceutical and chemical firms. Excluding the latter, they find aggregate litigation losses about five times greater than estimated gains. These aggregate figures of course hide winners and losers, both individually and between sub-groups of firms. Firms with less than 500 employees about break-even as a group; larger firms are significant losers. Chemical and pharmaceutical firms gain far more than they lose through litigation.

This leads naturally to the drivers of patent litigation. A range of factors that might account for the growth in the patent litigation risk are identified: firm size, R&D intensity, capital intensity, market value, existence of patents in neighbouring firms. These factors explain a lot about litigation rate variations between firms, but not the increase in litigation risk over time. The authors argue that the primary culprit is ‘erosion of the notice function’ (legalese for a decline in the clarity of patent boundaries).

Litigation risk varies across technologies and by firm size. Chemical patents provide good notice and are least litigated. Financial patents are 27 times more likely to be litigated than other patents. The variation in the risk of litigation leads into the two special chapters: one on small firms, the other on software patents.

The chapter on small firms is perhaps the most disappointing, but of course data deficiencies are particularly evident here. Three questions are set up at the beginning of this chapter—do small inventors make more valuable contributions, are patents more valuable to small inventors and why don’t patents deliver more value to small inventors—but the discursive discussion does not provide clear answers. One difficulty with this chapter is that some of the data used seem to refer to registered designs as well as patents of invention. This melding of two quite different types of monopoly—one for form and one for function—is a peculiarity of the US system, but the argument of the book is about invention (function) not design, so it would be preferable to exclude registered designs.

The software chapter, on the other hand, is particularly useful in highlighting the problems of abstract patent claims, leading to claims for what is not possessed, and worsening the notice function of boundaries. Bessen and Meurer conclude

that the patent system performs particularly badly for software, and even worse for business methods. They estimate that software was 38% of the total public firm litigation cost in the late 1990s. Partly because of the level of abstraction, claims construction is far more likely to be reviewed during any appeal. Abstract patents undermine a fundamental assumption of patent law: that two technologies can be unambiguously determined to be equivalent or distinct. The abstraction problem adds further to the patent boundary problem because of its role in the proliferation of trivial patents.

The recommendations for reform (Chapters 10–12) focus on resolving the boundary problems and improving the notice function. By improving patent notice, the risk of inadvertent trespass will be reduced, and so the risk of litigation. While the authors argue that such reforms are a *sine qua non* of improving the performance of the patent system, they also recognise that a range of other issues need to be addressed, including institutional reform. These other reform proposals include improvements in patent quality (which by reducing the volume of patents would reduce the cost of establishing boundaries); requiring clarity in patent claims (which would also reduce the costs of establishing patent boundaries); time limits on the application process (to reduce ‘ambushing’) and improved arrangements in regard to the processes of and penalties for infringement. In particular they recommend an independent invention defence, at least as a mitigating circumstance. Their list of suggested reforms is well-considered and thought provoking.

I enjoyed reading this book, and found a wealth of useful leads to other research. The extremely clear exposition of the boundary problem in patent law was enlightening. Highly recommended.

Notes and References

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2. F. Machlup and E. Penrose, ‘The patent controversy in the nineteenth century’, *The Journal of Economic History*, X, 1, 1950, pp. 1–29 at p. 16.

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Greater Good: How Good Marketing Makes for Better Democracy

John A. Quelch and Katherine E. Jocz

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Greater Good: How Good Marketing Makes for Better Democracy is a treatise which seeks to explicate the relationship between marketing and democracy; two areas of human endeavour that are criticised oftentimes when they fail to deliver on their promises and yet are taken for granted or go unacknowledged most times when they do

deliver. Principally, the book appears to have been written as a primer in marketing for politicians; more specifically, it offers the precepts of marketing as a solution to the challenges faced by American politicians and their style of democracy.

The authors make the claim that marketing 'is of fundamental importance to society' and should not be treated as a 'superficial irrelevance' (p. 23). This may be so but I was disappointed to find that the authors had not included any discussion on the philosophies and theories of either marketing or democracy in support of their claim. Thus, the reader is expected to unequivocally accept free-market capitalism together with the American style of democracy as well as the organisational hegemony of marketing with its cardinal maxim: the organisation's customers are prior to its stockholders.¹ Amongst other things, this normative sleight avoids debate concerning two accusations often levied at American politicians: that they conspire together in a duopolistic political market and that they serve their business sponsors firstly and not the people whom they represent.

Given the absence of higher discussion, the treatise proceeds at the functional level and, as one would expect from authors who are also academics, the work is referenced well; it contains 33 pages of endnotes in small font. Written for the non-marketer, the text is penetrable for the most part and yet, because of the high levels of detail, reading progress can be slow at times. Temporal salvation might be found in the introduction and its 23 pages which serve extremely well as an executive summary and, considering the book's target readership, could well suffice for all but the avid reader or insomniac. Alternatively, for the reader with even less time or attention span, the authors have published a two-page promotional synopsis in *Advertising Age*.²

I am not persuaded that the comparison of marketing, a business function, with democracy, an ideology, is at all possible. Whilst not proclaiming concomitance, the work attempts to convince us that each may inform the other through an almost symbiotic relationship. However, given marketing's dubious past, this seems to be an oxymoronic combination of instrumental and intrinsic goods and Hume's Law springs to mind immediately. Indeed, and according to the authors (p. 220), in 2004 some 64% of Americans said that they were concerned about the practices and motives of marketers and 69% said that they were interested in ways in which to block marketing (presumably, ways in which to block the promotional element of the marketing mix).

The book is divided into two parts. The first part, *Marketing as Democracy*, introduces the reader to the six 'benefits' of good marketing and seeks to demonstrate how these are congruent with those of democracy. Each 'benefit' occupies a chapter.

These 'benefits' are listed as *exchange* (free and fair transactions), *choice* (control and choice over offerings), *engagement* (active participation in the marketplace), *information* (informed understanding), *inclusion* (almost universal inclusion) and *consumption* (the ability to satisfy basic needs and other wants and preferences). After some considerable thought, I would rather classify these as 'features' and not as 'benefits'. Put simply, marketing defines 'features' as being the characteristics of a product or service and a product's 'features' are collectively termed the *actual* product. 'Benefits' are the needs of the customer which are sought to be satisfied by a product's 'features' and the 'benefits' offered by a product are collectively termed the *core* product. Benefits are mostly abstract; they fulfil human needs and are often described in terms of Maslow or other humanists. The authors too refer to benefits as being 'abstract or ideal' (p. 258). Put even more simply, 'features' are what a product is and 'benefits' are what it does for the customer. Therefore, under

this lamp, the authors' list appears to be more *actual* than *core*. This suggested adjustment to Quelch and Jocz's taxonomy is no confutation or arrogation on my part as I feel sure that the authors have spent many hours of debate on the same points and I would not wish to disturb the central plank of their book.

Nevertheless, the claim is made that good marketing and democracy share a common *core* product and examples of its benefit components might be liberty and self-determinism. In support of this view, and in response to allegations that marketing is responsible for hedonism-consumerism, research indicates that 'unrestrained freedom' is a desired human condition and a benefit that marketing is best placed to fulfil.³ The authors put forward equality and fraternity as further components of marketing and democracy's common *core* product (p. 16) and I would like to support this view except for my feeling that marketing may find it difficult to yield these two benefits simply because of its propensity for segmentation and, as Fitchett argues, a consumer's responsibility extends only to their own needs, wants and desires.⁴

Beyond the central plank, marketing practitioners and those who teach marketing may challenge the use of other notions in the book. For example, the further use of the product concept (p. 259) seems deficient in that it reduces a well-accepted three-part model down to two parts and appears to confuse features with benefits once more.⁵ Besides this, researchers may challenge Quelch and Jocz's use of statistics. For instance, the authors suggest that voter apathy is high in America because 'more people voted in the spring 2006 final round of American Idol than in the previous presidential election' (p. 127). I am not a psephologist but I suspect that many more people are entitled to cast pebbles in the American Idol election than are entitled to do so in any American presidential election and it is disappointing that the authors failed to make this relative comparison. Whilst I am sure that omissions such as these are not deliberate, they do little to enhance the reputation of marketing and may well seem sophistic almost to the uncharitable mind.

Having sought to establish in the first part of the book that good marketing's actions are wholly democratic, the second part of the book, *Marketing for Democracy*, seeks to identify the needs of democracy in several areas and how marketing might satisfy those needs. These areas are *Politics*, *Media*, *Programs* and *Nations* and each one forms a chapter.

In *Politics*, and amongst many other things, there are attempts to distinguish between different styles of democracy. Such different styles may be described, in marketing parlance, as brands. I believe that more could have been done here, not least of all to inform the American politician much further in the democracies that lie beyond the American free-market, zero-sum brand. For example, social democracy (Europe in the main, with its various sub-brands centred on proportional representation), direct democracy (Switzerland in part, through its many referenda), enforced democracy (Australia, because of its compulsory voting) and even 'unacceptable' democracy (Palestine, despite its scrutinised free and fair elections) could have been discussed in greater depth in order to address the high levels of ethnocentricity alleged of American politicians by many commentators.

The *Media* chapter reports on the condition and outlook of the fourth estate with regard to its role as a guardian of democracy. Partisanship in the media along with the effects of industry consolidation and the influence of both governments and high-spending advertisers on editorial and news content are considered.

People may feel the touch of marketing in two main areas of politics. These are the promotional efforts of political candidates prior to election and the post-

election delivery of governmental services. Within *Programs* designed to provide government services to people, marketing manifests most prominently in America through privatisation and it is here that a key feature of democracy is threatened: universal access. It is Kahn and Minnich who comment on the seeming abandonment of social welfare programmes in favour of 'corporate welfare' which has replaced universal access with an emphasis on social and economic opportunities achieved only through individual self-determinism.⁶ This might show the need for equitable balance in the benefits of democracy; a point not pursued strongly by the authors and one that marketing alone cannot address. If, as Fitchett reports, customer satisfaction is now seen as an inalienable right in the more prosperous segments of society then such iniquity moves marketing to a position antithetical to democracy.

In *Nations*, the authors consider the ways in which nation-states market themselves and the way in which America markets (exports) its brand of democracy to other nation-states. I am not sure how Igor Ansoff would have reacted to the authors' euphemistic use of the word 'marketing' (p. 246) to describe America's invasion and occupation of Iraq; market extension, elimination of competition in support of regional clients and joint-venture partners or simply America's struggle for autarky by military means?

In fairness, and not wishing to be accused of constructing any jeremiad, I have to report that the authors do levy some criticism at the ways in which America has sought to export its democracy. They complain that the brand suffers from poor image, there is a lack of understanding of target markets and that promotional promises do not come to fruition. However, I sense no imperative on the part of the authors. Moreover, Quelch and Jocz's style seems sycophantic almost and their chiding is genteel through allegoric attempts to keep American politicians 'on-side'. This is all the more surprising for the authors are no parvenus and, whilst not expecting the activism of, say, Klein⁷ or the ferocity of Sardar and Davies,⁸ a more forceful approach would have brought a more favourable review of the book overall. In this respect, I feel obliged to consign the book to my growing pile of tomes which are unlikely to change the beliefs of the many American business owners, organisational leaders, politicians and academics who have little idea of how the world perceives America and the eventual economic and social catastrophes likely to be brought about by that schema. However, for any marketing consultant looking to sell their services into the American political system then this book should be at the very top of their list of promotional Christmas gifts for prospective clients.

In valediction, I turn to Alan Ryan⁹ whose comments on democracy include the tendency for democratic governments to elevate smooth-talking salesmen to positions of authority that they do not deserve. *Caveat emptor!*

Notes and References

1. The proposition that marketing is the paramount business function is not new as claims for the primacy of marketing stretch back over 35 years. For example, see Philip Kotler, 'A generic concept of marketing', *Journal of Marketing*, 36, 1972, pp. 46–54; Philip Kotler and Sidney J. Levy, 'Broadening the concept of marketing', *Journal of Marketing*, 33, 1972, pp. 10–5.
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The War for Wealth: The True Story of Globalization, or Why the Flat World is Broken

Gabor Steingart

New York, McGraw-Hill, 2008, xii+298 pp., US\$29.95, ISBN 978-0-07-154596-9 hbk

'You know what America reminds me of right now? Rome, before the fall.' This comment, made to me on a flight to California four years ago by a Canadian doctor interning at an ER in New Orleans (because 'the variety of wounds you see in New Orleans are more interesting') came back to me when reading Gabor Steingart's often extremely pessimistic review of the history and future of globalization. Steingart's central thesis is that America is sleep-walking into a disastrous situation where the potential benefits of globalization have been overestimated, and the challenge to its economic predominance is of a magnitude to match the conditions leading to the fall of past great empires. Steingart's work was published during the early stages of the global credit crunch, and consequently its *fin de siècle* outlook may be timely.

The book is in part a review of recent political and economic history, a review of threats posed by emerging economic challengers to America's position as the only global economic and political superpower, and an attempt to suggest solutions which the author suggests are urgently required to prevent America's fall from economic dominance. Readers in Europe should note that the book is principally intended as a rallying call for America, and that while other Western economies may benefit from responding to Steingart's analysis, his focus is upon America and its interests.

A strong argument running throughout the book is that supporters and critics alike are missing the point of early twenty-first century globalization. Indeed Steingart suggests that a mass delusion underpins current perspectives on globalization. Both advocates and critics of globalization assume the economic predominance of the West will endure, and the author believes this is not inevitable. He identifies a number of critical fallacies that are distracting advocates and critics

alike from the real threat of a changed global economic order. Many of the fallacies will be familiar to observers of recent political and economic debate. For example, he presents strong arguments to refute claims that the natural progression for a developed economy is from an industry-based to a service based-economy, that moral considerations have no place in economic debates, that 'the tide of globalization automatically lifts all boats', and that globalization is a great work of peace. He suggests that these fallacies reveal wishful and dangerous thinking.

Steingart's assessment is a partial one in the sense that he adopts a strongly negative perspective discounting most arguments supporting the current conceptualizations of globalization, and hence it is likely to be a controversial assessment. The book is a bleak and pessimistic assessment of America's economic future. However, it is saved from being merely a negative polemic because of its apparent political impartiality. Steingart is simply concerned with saving America's economy, and is not intending to support any particular party. Indeed there are elements in his solutions which will simultaneously hearten both right and left—calls for both greater protectionism and universal workers rights—and it is the impartiality of the solutions that makes this an interesting read. The book is effectively a challenge to the incoming US administration—red or blue—to review their assumptions about how globalization works. Steingart suggests that the current assumptions used are wrong, and a partial attitude will not offer any sort of working solution. Indeed his ultimate solution is the very opposite of a partial solution, but more of that later.

Steingart begins by reviewing recent economic history. He discusses the European emergence before and during the industrial revolution and the passing of the baton to America after World War One. It is not a positive review of the antecedents of globalization. It starts with a negative assessment of colonialism, offering a counter perspective to the French notion of a *mission civilatrice*, and other positive interpretations.¹ Colonialism, he suggests, brought short-term gains and long-term disadvantage. World War One was a product of the short-term advantage offered by colonialism, and ultimately destroyed the advantage European inventive genius created. America's progress to economic hegemony is then described, a review which concludes by discussing how the direction of American economic endeavor is leading to a potential disaster. A key theme throughout the book is the statelessness of capital—how it owes no allegiance to a nation and simply seeks reward wherever it can find it. It is this aspect of capital, the foundation upon which America's success was built, that may ultimately lead to its downfall if it is not checked. Because, Steingart argues, America is no longer inevitably the beneficiary of capital's impulse to operate globally.

This is because America's major challengers—specifically China and India—are competing unfairly, and providing capital with an irresistible attraction; opportunity without responsibility. Steingart suggests that both China and India have evolved hybrid economic models. They make use of the underpinning rationale of the market, but do not acknowledge the social responsibility of business operating in the traditional capitalist economies. Hence, where American or German products include a contribution to social welfare within their cost structure—as US and European companies contribute towards the social welfare of the workforce—this is not the case in economies where such social responsibility is not recognized. Hence Chinese and Indian manufacturers possess an inbuilt cost advantage, based upon building a capitalist business model upon an authoritarian political model. China and India are, suggests Steingart, taking advantage of the type of factor economies identified by Michael Porter but in a way not envisioned by most writers

on globalization. There is no 'leveling up' in evidence here; the benefit of the sweat of the workers will not be shared but will go to build bigger and ever stronger elites. Hence the notion of a flat world, or an even playing field, is wrong.

Having outlined his pessimistic analysis of the threat posed to America, Steingart looks to the future. This involves discussing three potential scenarios, the first two of which offer different degrees of threat, and represent the penalties of complacency. The shock scenario is essentially a recipe for economic mutually assured destruction, and while this is not an enticing prospect Steingart does at least suggest that it is in neither America nor its challengers' interests to destroy each other. However, the second scenario, which he describes as the 'Asia-above-all' scenario, predicts America's economic downfall and the rise of new economic and military superpowers, and this is the scenario Steingart clearly fears is the most likely, unless action is taken.

Hence the 'American Renaissance' scenario outlines Steingart's solution to the problems he has spent the previous six chapters outlining. It would be an understatement to suggest that the steps outlined here are ambitious—if successfully achieved they would represent a profound and revolutionary reappraisal of American attitudes towards free trade, the role and responsibility of capital and government, and personal consumption. However he would argue that anything less than radical action will lead inevitably to scenarios one or two. Some of the steps are familiar from political debates of the past century, some are calls for America to reassert itself—all would require a substantial change in behavior for Western politicians and citizens.

He opens by suggesting that America needs to redefine its understanding of globalization and free trade, and in particular its expectation that prosperity is inevitable. Free trade does not, he suggests, inevitably bring prosperity. We increasingly know this to be the case for those whose futures are destroyed when jobs are relocated offshore. However, Steingart argues, this also applies to those whose jobs have not (yet) fallen prey to globalization. Without a functioning manufacturing base, the economy will falter and that will affect everyone. Hence it is in every American's interest to stop global capital from relocating to maximize its profitability if that action weakens America's socio-political and economic base.

Additionally, America should insist upon more stringent rules to govern global trade. China and India, Steingart suggests, are winning because they are playing by a different set of rules to America and the West. Western concern for responsibility and governance makes this situation even worse, as this simply imposes stricter rules upon the West, building Asia's advantage. Steingart calls not for a loosening of the rules in the West, but their imposition in Asia. If we believe in protecting workers rights or the environment, then we should impose this concern on the whole supply chain rather than simply those parts based in Western economies. Next, America should demand a re-leveling of the playing field. Western values are built into the West's economic outputs, but they are not shared universally. Make acceptance of Western values an order winning requirement for Chinese and Indian companies. If you don't believe what we do—that children deserve a childhood, that workers deserve protection, that the environment is not a free resource—then we will not trade with you. These steps are potentially expensive for Western consumers used to having what they want, when they want, and cheaply. But the 'bread and circuses' of modern consumers—televisions, iPods, games consoles—are the products of manufacturing activity which does not subscribe to Western values.

American workers need protection, and American companies need help. If our competitors persist in playing an unfair game, then America's government needs to intervene to even things up—and this implies government action to demand universal workers rights as a condition of participation in global trade. Similarly, as Steingart argues that American business is hindered by their welfare obligations, handing the advantage to its competitors who do not experience comparable obligations, so he argues for welfare to be funded either by a consumption tax—levied on all goods irrespective of their provenance—or by the state itself, relieving corporations of their responsibility and improving their competitiveness. These are controversial suggestions, increasing the role played by government in a country traditionally suspicious of 'big government' but at the same time relieving some of the burdens upon capital that may be causing it to migrate to more profitable operating environments.

The final suggestion is the most ambitious, as its implications are geopolitical. Steingart suggests that the magnitude of the threat to Western economic, social and political prospects and values is so great that it can be counterbalanced only by America and the West drawing closer together politically. He proposes a 'United States of the West', a confederation of independent nations based upon common values and a common self-interest. Membership would be open to all nations that share these common values, and exclude all those who do not; hence a commitment to social welfare would be a prerequisite for membership. Essentially, this is a method by which the earlier steps can be operationalized. Steingart's 'United States of the West' is a reimagining of a World Trade Organization based upon a set of principles that are recognizably Western and has the sole purpose of defending members' interests. It would be an institution which could codify and uphold the rules of the game to level the playing field and undermine the sources of advantage the West's competitors trade upon. We can imagine that products will cost more, but more people will be in work (and well paid work) so the impact will be mitigated. Goods and services will be created and sold that uphold more elevated principals than 'the cheaper the better'.

Opinion polls for the 2008 American election suggest that a large majority of Americans believe their country has lost its way. There are many reasons for this perspective, and they will inevitably be contradictory on occasion. However, the primary campaigns suggested that the threat of globalization, specifically the continuing hemorrhaging of American jobs overseas, is a critical issue. This challenging and provocative book provides much for voters and politicians to think about. But questions persist: how strong are appetites for change in America, and can it wean itself off of its passion for bread and circuses?

Notes and References

1. For example, the work of popular historians such as Niall Ferguson, *Empire: How Britain Made the Modern World*, Penguin, London, 2004.

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A Culture of Improvement: Technology and the Western Millennium

Robert Friedel

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This is a beautiful book that provides a well-researched and very accessible outline of the role of technology in Western development since the end of the first millennium. Of course, there have been several such books before; so what is Robert Friedel's angle? A culture of improvement, says Friedel, is 'the ascendancy of values and beliefs permeating all levels of society that "things could be done better"' (p. 2). In other words, it is the attitude that produces a certain disposition towards technological development. In adopting this approach, the author draws attention to the many small contributions of ordinary anonymous workers and tinkerers rather than the well documented inventions and discoveries that make it to the history books. Oddly, he claims that these technological 'tinkerers' were 'antiliterate' in the sense that what they produced could not easily be put into words. By contrast, the nature of technological change in the last 500 years has been considerably altered by new and more effective means of capture (p. 6). More particularly, he argues that 'For all but the last century or two, this increase in the mastery over matter has come from craftsmen's observations alone, without theory or philosophy' (p. 72). So does Friedel succeed in developing this two-part thesis? Well, not entirely, I think, but there is considerable good reading to be had nonetheless. For example, one wonders how his account of the new approach to scientific knowledge that began in the seventeenth century (Chapter 9) fits this claim. Friedel argues that 'while these intellectual changes did indeed profoundly reshape the relations between science and all other realms of human endeavor, including technology, they were not themselves the sources of either key technological changes or of new ways of thinking about technology' (p. 155).

Friedel, a University of Maryland academic who also advises international museums including the Smithsonian, is a fine historian because he has shown a capacity for resolute primary research, an ability to craft a story from secondary sources, and a desire to engage the non-history reader, as well as infusing a sense of humanity in his work. The best example of these attributes is his 1994 book, *Zipper: An Exploration in Novelty*, which depended heavily on unusual primary research about the development of such a commonplace item from 1893 to 1920, but which also considered the sociological implications of the death of Meadville as an industrial community. This latest book, on the other hand, relies primarily on secondary sources including his own work. While he tells a good story, I think he is less successful in maintaining his thesis propositions.

The book comprises 26 chapters, each about 20 pages long, and follows a thematic, but also roughly chronological pattern. Most chapters begin with a wry statement of the time, as in Chapter 5, which begins with a recommendation by Theophilus Presbyter, a twelfth-century monk, that tools might be more effectively hardened by immersing them in the urine of a small red-headed boy. The correct disposition to improvement is developed early in the book where Friedel looks at the approach to the most basic production, agricultural production of food. He points out that, from the time of Charlemagne in 800, the social attitude to work altered from a sort of penance to a sense of productiveness, interestingly very much in the monasteries. Yet there were far more profound changes than that of attitudes to work. These

emerge from the chapters, although there is no overall meta-theme or proposition that runs through the book where Friedel reminds us how what we've just read contributes to the validity of his claim. For example, in Chapter 6 'Light and Time', Friedel begins with Alessandro Spina's invention of spectacles around 1285. This leads us into a description of the Venetian glass industry from the thirteenth to the sixteenth century. He then segues into the way that Venetians changed the shape of a trading ship from the galley using wind and oar power to the caravel, and then from this to the magnetic compass and ship-based horologues. This is all interestingly and elegantly written. Yet, when we get to the time of Leonardo da Vinci's arrival in Florence in 1469 and the Venetian Senate's passing in 1474 of the first putative patent law, I am left in a quandary as a reader as to how the first part of the chapter, which supports his thesis, is reconciled with the latter part, which chronicles the emergence of 'pure science' and the commoditising of scientific inventions.

Nonetheless, there are times when Friedel remains on song. The stonemasons building the Gothic cathedrals embody the change from the antiliterate tinkers of previous times to a professionalised group who maintained excellence and transformed knowledge by forming lodges that became repositories of unfolding knowledge and developing schools that set standards of craftsmanship. It was perhaps Denis Diderot, and the lesser known Scot, Ephraim Chambers, who did the same for scientific knowledge in the eighteenth century: that is, chronicle and store the information for dissemination. Importantly, Diderot, we learn, incorporated the knowledge of scientist and artisan (p. 235) to contribute to this great project of the *philosophes*, the rationalists who believed in the progress of knowledge and 'more perfect products'. The development of pre-industrial science and industry, particularly generating mechanical power, supports his thesis. The waterwheel story, for example, is not so much one of novel invention as 'its intensive and extensive application' (p. 32) and various incarnations. Water-based power was essential to the development of two significant industries: textiles, where its scouring capability massively altered the dreary and smelly processes of manual labour, and ironmaking. Architecture (Chapter 4) is also an example of slow accretions of knowledge that gradually altered the building of churches in particular. Thus, the Gothic arch that replaced the chunkier Romanesque style permitted greater light, which represented the presence of the divine in churches. Other clear evidence in support of Friedel's claims about incremental, theory-free changes is provided by the papermaking, textile, and steel industries, which he chronicles.

However, the history of technology and science is always affected by the significant external factors of economy and trade and of warfare. Conquest, warfare, and trade induced significant changes from the beginning of the second millennium. For example, the Normans brought new ways of doing things such as governing and accounting to Britain in the eleventh century. The Crusades, although driven by an intolerant religious fundamentalism, did ironically open the West to significant Eastern influences. From the trade in spices, in particular, an emergent capitalism developed as capital was raised, often by joint stock enterprises, to build and sail ships, and as permanent exchanges replaced fairs. As a proto-capitalism emerged and industry- and craft-based changes continued in the eighteenth century, so too did the advance of pure scientific knowledge. Friedel acknowledges that the paradigm was a 'triumph of the mechanical philosophy and of the clockwork picture of the world ... [that replaced] an older conceptualization of nature that was essentially organic' (p. 169). We learn also that scientific development was not uniform. For example, the eighteenth century saw the first tentative steps in producing

electricity and in developing a theory of chemistry (Chapter 14). Whereas the development in electrical science and technology amounted to little more than Benjamin Franklin's lightning rod and the cumbersome Voltaic pile (1800), the advances in chemistry were far more impressive. This was largely due to the French who effectively linked science and industry. This is particularly so of Antoine-Laurent Lavoisier who 'emphasised the close connection between theory and practice' (p. 269). In fact, Friedel argues that it was chemistry that induced the transformation from the Age of Enlightenment to the Age of Industry. He suggests that Abraham Darby III, the grandson of the man who devised coke smelting, represents the quintessence of this Age of Industry when he built the cast-iron Coalbrookdale Bridge in 1777, as he combined science, technology, and the new capitalism.

Friedel's concern for humanity is evident throughout the book such as in his accounts of the appalling effects of alkalis and bleaches on workers in the nineteenth-century textile industry. It is fitting, then, that his closing chapters include 'The Corruption of Improvement' (Chapter 24) and 'Improvement's End' (Chapter 26). The Lutwaffe's bombing of a civilian population in Guernica in 1937 and the Du Pont Company are emblematic of the new 'military-industrial complex' that (good heavens, a Republican) President Eisenhower warned of in his 1961 Farewell Address, although he did initially label it a military-industrial-congressional complex. In 1916, Thomas Edison chaired the Naval Consulting Board overseeing military invention, and British aviation research was dominated by the RAF at Farnborough. He concludes solemnly that 'When the notions of improvement, along with the faith that there were no boundaries on human capacity to pursue it, were applied to the human species itself, the consequences were horrific, and the culture of improvement itself was profoundly changed' (p. 489). Meanwhile mega-firms such as Standard Oil, Western Electric, Bell Labs, and Du Pont were able to direct huge amounts of money into industry-based research, effectively ending the age of the 'tinkerer'. Two other significant trends also impacted on the 'culture of improvement'. The study of human biology began to provide knowledge that could alter human life itself. Mendelian genetic theory in the hands of arrogant and inhumane people transformed into the politics of eugenics that was officially sanctioned in the US with the *Buck v. Bell* case in 1927 when CJ Oliver Wendell Holmes declared that 'Three generations of imbeciles is enough' (p. 498). However, it was most enthusiastically adopted in Scandinavian countries where 100,000 forced sterilisations occurred between 1929 and the mid-1970s. Crick and Watson's discovery of the structure of DNA in 1953 has, so far, produced less ethically repugnant outcomes, but has raised serious concerns about tinkering with life itself or misapplications by such industries as insurance. Friedel also mentions the environmental movement's effects, but seems relatively mute on the potentially catastrophic outcomes of global warming.

This is a book well worth reading, perhaps more as one that offers interesting chapters that can be read independently. Although Friedel to my mind hasn't consistently argued his brief, he has provided a very accessible piece of scholarship that could usefully inform debates on the philosophy and history of science and technology.

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Complexity, Management and the Dynamics of Change: Challenges for Practice

Elizabeth McMillan

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This is a book with 11 chapters: 1. Introduction; 2. The Clockwork Manager; 3. Complexity Science; 4. Change and the Dynamics of Change; 5. Complexity in Practice; 6. Complexity in Action; 7. Self-Organizing Change Dynamics; 8. Essential Principles for Introducing a Complexity based Change Process; 9. Innovating and Changing; and 10. New Perspectives, Future Possibilities.

Elizabeth McMillan provides a very readable and accessible text that will suit managers and students with little or no prior background knowledge about complexity science and how it might be applied to organisations. It argues that times have changed and that the current received wisdom about how to manage change is no longer suited to the turbulent environments in which many organisations operate. Conventional thinking about how to manage change is, as Stacey¹ describes, based upon strategic choice theory that is derived from economics and systems thinking. *Complexity Management and the Dynamics of Change* aims to demonstrate complexity thinking is different, show how the insights of complexity science can allow today's managers to embrace the challenges and uncertainties of the twenty-first century and help them to oversee successful organisational change and development.

This book will no doubt attract its critics. McMillan tells us in the introduction that she wrote the book because she is 'passionate about complexity science and the potential it offers not only organisations and managers, but society as a whole' (p. 4). In offering this statement, she has honestly made her partiality clear at the outset and her passion is evident throughout the book, which argues the case for the adoption of a complexity perspective on the management of organisations. Is this a problem? Well, some might regard this stance as overly polemic and argue that metaphors and management fads come and go. For example, Clint Witchalls, who supplied a brief review of this book for *The Spectator* in May 2008, expressed a scepticism concerning the relevance of complexity. He wrote that during the 1980s,

Every good management consultant—and plenty of shoddy ones too—had a copy of Sun Tzu's *The Art of War* in their briefcase. Business wasn't for wimps ... old metaphors die hard and most businesses are still run by officers (CEOs, COOs, CFOs) who devise strategies and rule by fiat; just like the military.²

This may be true, however the first question posed by a reading of McMillan's book is not whether many CEOs continue to run their organisations like warmongers, but whether or not the old 'command and control' approach is best suited to organisational requirements for change in their rapidly changing twenty-first century environments. The second question is whether or not complexity science can offer an alternative approach that is more than just another metaphor. McMillan, for reasons which have nothing to do with any partiality towards complexity on her part, concludes that the old top-down style of command and control is no longer an appropriate management approach. Her conclusion to this

first question is in accord with numerous other commentators. The top-down style of strategy formulation and management has attracted critics since the 1980s, the majority of whom have been uninformed by the new science of complexity. The tensions between controlling and learning rose to prominence in the works of authors such as Peter Senge³ and Arie de Geus⁴ before Gleick⁵ popularised 'Chaos Theory', the predecessor of complexity science in the management literature. In response to the second question, McMillan clearly believes that complexity does offer an alternative approach that is more than a metaphor, but the book is written in a manner and style which allows readers to arrive independently at an informed opinion on this issue.

One of the key strengths of this work is Chapter 3, 'Complexity Science: Understanding the Science'. This chapter, written in two parts, offers a well-written, readily comprehensible and digestible outline of the development of chaos and complexity science along with an elucidation of key themes and concepts.

Complexity science is concerned with complex adaptive dynamical systems. These systems can absorb information, learn and adapt to environmental changes without the need for overt command and control. They achieve this through the mechanism of self-organisation, which allows them to co-evolve naturally with the environments they inhabit. Many of the key tenets of this science will have undoubted resonance with practising managers and students of management and organisation. For example, the idea that seemingly small changes within a system or its environment can have unpredictable and disproportionately large effects might be illustrated by the well known example of the rise of Dell in the 1980s. Dell was a relatively small company with an innovative strategy in an industry dominated by IBM—an established giant. Despite its size and position in the industry IBM's dominance was eroded by Dell, something that established ways of thinking about strategy and change would not have predicted. Complexity science, of course, would not have predicted this development either. Complexity thinking regards the long-term predictive exercise as a forlorn hope. This book goes to some lengths to explain why and how complexity thinking really is different from the conventional 'Newtonian–Cartesian' science paradigm that underpinned the scientific revolution, but it does not suggest that we abandon this paradigm entirely or disregard the knowledge it has given us. It merely highlights the fact that it has been shown to have explanatory limitations in addressing dynamical systems, which are changing even as they are studied. Conventional science is not designed to address the paradoxes, contradictions and irregularities in such systems. Complexity science is. This means that conventional science, successful though it has been and will no doubt continue to be within its limited sphere of application, can never be expected to fulfil the original hopes that were held for it, namely to provide a universally predictive theory of the universe.

After a close reading of Chapter 3 of this book, I would expect most managers and students to see the relevance of many of the tenets of this new science to the current turbulent world of organisations. The question is can complexity underpin a different approach to organisational management in practice? Although complexity provides a new and different paradigm, it has not led to a new dominant fully fledged management science based upon complexity principles. Complexity is still an emergent and relatively youthful perspective on organisations which has not as yet been fully explored and developed in the organisational management context. This book illustrates the successful practical application of complexity science ideas

to organisations and identifies a number of issues which can arise when they are applied. It demonstrates that complexity thinking can underpin successful organisational change and that it can offer managers more than a new metaphor.

Clearly, in a book of this length it would prove almost impossible to meet every desirable goal. The book is exceptionally strong in explaining the holistic nature of complexity thinking, complexity science, how it developed and why it has the potential to underpin a new management science, but one can't help but think that these achievements have to some extent been at the expense of a more sophisticated discussion of recent strategy process, strategic activity and strategic change research in Chapter 4. Given that the orientation of the book is towards management students and managers working in the field, who might be expected to have some grounding in strategy, but are not expected to have a good grounding in complexity science, this may have been a conscious compromise on the part of the author. The book makes basic connections and links with the classic works of Quinn,⁶ Senge⁷ and Mintzberg and Waters,⁸ but stops short of making those same links with more recent writers like Whittington,⁹ Jarzabkowski,¹⁰ Maitliss and Lawrence,¹¹ Samra-Fredericks,¹² and others who have begun to develop an 'activity perspective' on strategy and encouraged researchers to become more aware of the holistic context of the strategy process. An extended discussion of some of these authors would have further strengthened the case for the application of complexity management principles to organisational change management in volatile environments.

To summarise, the main weakness of this book is that it does not discuss some of the more recent perspectives on the strategy process in the light of complexity thinking. However, this weakness is counter balanced by the fact that it offers students and managers a clear and well-written elucidation of complexity science as it is and can be applied to change management. It is probably one of the most accessible expositions available. The book is practically focused and offers a sound introduction to the complexity management field along with concrete suggestions based upon research as to how complexity management can be implemented in practice. It demonstrates that complexity thinking can be successfully applied in practical change management contexts and in doing so challenges the notion that complexity is merely a metaphor. Students and managers will find this book useful as an introductory text.

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Billions of Entrepreneurs: How China and India are Reshaping Their Futures and Yours

Tarun Khanna

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Seven years ago, while I was studying for an MBA, an Oxford professor mentioned that in the future business-minded people wouldn't go to Western universities to obtain their degree, but to Chinese institutions. Today, China's role in an increasingly interconnected world shapes business talk. And the spectacle of Beijing's spectacular Olympic Games has amplified China's global profile. As a German, living in Frankfurt, I seem to see much that makes me think of China. On one side, my neighbours are Chinese. On the other side, my neighbours are Dutch people who make a living by investing in Chinese companies. Even my dad, who is normally not particularly adventurous, went on a three-week 'adventure' travelling between Beijing and Shanghai. Meanwhile, my experience of living outside Germany has served to nurture my sense of growing global mobility. In Scotland, I lived next door to Indians and eating Indian food was at least a weekly experience. And my present work affords glimpses of India that go far beyond its famous cuisine. As a consultant in a virtual global team, I have constant contact with computer programmers near New Delhi. Albeit in different ways, Chinese and Indians have certainly shaped my life. When I saw Tarun Khanna's book about 'billions of entrepreneurs' reshaping everyone's futures, the temptation was irresistible. And I surely wasn't disappointed.

Khanna is a Non-Resident Indian who grew up in a wealthy family in India. He is now a Harvard Business School professor with a gift for persuasive prose: a colourful and lively mix of facts and personal accounts. His book is not addressed to any particular target group. It deploys historical, economic and cultural perspectives to make sense of China and India—although the 'angle of attack' appears to have been calculated with regard to distinctly American assumptions. After setting the scene with a chapter entitled 'Reimagining China and India', Khanna splits his text into three parts: 'Foundations', 'Enterprise' and 'Future'.

From the outset, Khanna weaves webs of stories. Gradually, story-by-story, Khanna paints pictures of how different corners of China and India look under different lights. As the book develops, clearly discernable themes become apparent.

- Chaotic, unaccountable, but democratic India is full of forgotten people and untapped skills. They have a foundation for a market economy. Indians dissent, for dissent's sake.
- China uses coercive power that leads to efficiency, hierarchy and bureaucracy. But they have no foundation for democracy or a market economy. The Chinese look for unanimity for unanimity's sake.
- Corruption perseveres in both countries.
- Tensions between China and India are evident in the emergence of mistrust and anxiety.
- The US reaction to China and India can be alarmingly naive.

So, how does Khanna develop his themes?

Chapters 2–5 comprise Part I of the project, entitled 'Foundations'. Taken together, China and India account for about one third of humanity: so where do you start? Chapter 2, 'Statecraft: The Art, Science, and Illusion of Governing 2.4 Billion People', begins with a personal story, which depicts the bureaucracy and chaotic justice system in India. This is contrasted with the apparent order in China's 'Nationals People's Congress', which forms the country's highest legislative body. Different histories have given rise to different problems but, despite attempts at reform, the spectre of corruption has haunted each country's efforts to develop. Although the array of opportunities and constraints differ: 'whereas order, harmony, and hierarchy have been the constant goals of the Chinese state, India has a proud tradition of pluralism, dissent, and debate' (p. 50).

Chapter 3's discussion of 'Bias and Noise: Information Accessibility in China and India' highlights the noise-free, but biased, business information available in China, compared to India's noisy and unbiased business information. Khanna describes how India's private companies represent the middle-class fight against the system, as depicted in the magazine, *Tehelka*, and its website, *Tehelka.com*. On the other hand, China has Internet police and censorship, along with the central belief of the Chinese government that 'stability overrides anything' (p. 53). For Chinese journalists, it is often difficult to judge the precise nature of acceptable boundaries: not least of all, because crossing the boundaries is punished by imprisonment. Nevertheless, China is moving towards increased openness. And, in Khanna's adopted American home, romanticised views of China often seem drawn to the country's mystique. Certainly, China obtains more media coverage than India. Possibly, American's are more curious about a culture that is far removed from their own, rather than with a culture, such as India, where apparent points of similarity abound—for example, with regard to democracy and its associated values.

In Chapter 4, 'Fiat and Fairness: Why China Can Build Cities Overnight and India Cannot', Khanna contrasts the Chinese state's capacity to construct according to collective interests with the dysfunctions arising from India's version of individualism.

China has breathtaking examples of rapid urban development, such as the skyscrapers of Shanghai's Pudong commercial district. In India, grand-scale projects are more problematic. China and India's different histories have given rise

to dramatically different institutions. Chapter 5: 'Manna and Miasma: Meanderings through Chinese and Indian Financial Firmaments', discusses the robustness of foundations for the market economy and the transparency of market information for the investors. In China, the stock market is based on bankrupt banks and biased information, compared to India's newly regained reliability of financial transparency through competition of financial institutions such as the NSE or ICICI. However, China's biased figures, if taken at face value, can look more interesting to investors. In essence, China is pro-foreign-investor and anti-indigenous-investor; India is anti-foreign-investor and pro-indigenous-investor.

The second part of the book, entitled 'Enterprise', looks at 'pockets of excellence' (p. 22) in the two countries. Chapter 6: 'Infosys and TCL: Unshackling Indigenous Enterprise' touches on the emergence of India and China's growing global giants. Examples include Tata's acquisition of Corus in the steel industry, Infosys and the 'India Everywhere' branding campaign—which promotes India as a pragmatic, forward looking, diverse India that is open to the world. All this is contrasted with Chinese attempts to build brands, including the story of electronic giant, TCL, and the Chinese oil giant CNOOC's attempt to buy the American oil company Unocal. And a fascinating subchapter on the China's state intervention in its private sector highlights the entrepreneur's high-wire balancing act: leaning too far towards either the state or the private can have catastrophic financial or political consequences. But, with so many angles discussed and so many stories told, it is hard to assess the nature of Khanna's own balancing act; although his language leans towards India and it would hardly be surprising if his analysis toppled in that direction.

Chapter 7, 'Microsoft and Metro: View From the World's Corner Offices', could be compelling reading for companies considering operations in China or India. For Microsoft in China, and Metro, a German wholesaler in India, progress involved relentless attention to local culture and its implications. Chapter 8, 'Diaspora Dividends: Paragons and Pariahs from the Overseas Chinese and Indians', then switches from organisational perspectives on global mobility to issues at the individual level. In India, Non-Resident Indians—or NRIs—have been stigmatised as 'not required Indians: the unwanted who dare to desert their home country'. In contrast, we have China's enthusiastic welcome for the flood of Foreign Direct Investment that surges from Chinese overseas: 'the world's 57 million overseas Chinese ... rule the world's third most powerful economy' (p. 170). More contrasts come in Chapter 9, 'Village Engineering and Reengineering: In Search of Rural Fortunes', where China's 'state-led physical infrastructure development' is compared with India's 'ground-up' approach (p. 212). Chapter 10: 'Barefoot Doctors and Medical Tourists: Futile Attempts to Confront the Grim Reaper' notes the lack of basic health care and sanitation for everybody in China and India. Yet, the dimensions of adversity differ. Khanna's Indian solution for the bad health care system involves public-private cooperation. For China, he would like to see the health care issue being placed back onto the political agenda, where it used to be.

The third and final part of the book addresses the future: is it about hard power or soft power? In Chapter 11, 'Old and New Roads to Mandalay: Hard Power in Burma and Beyond', Khanna considers whether China exploits Africa or is engaged in some quid pro quo partnership involving help with infrastructure in return for access to oil and other commodities. This, his argument goes, is hard power: 'the ability of a country to coerce and get its way through military power and economic weight' (p. 238). In contrast, India is using soft power, which is the 'abil-

ity to get what you want through attraction rather than coercion or payments. It arises from culture, political ideals and policies' (p. 238). These opposite approaches are further described using the examples of Burma and Tibet. For China, the import roads for oil through Burma are more important than human rights issues in the country. So, sanctions suit Chinese oil giants. Unfortunately, India is not fighting back or competing due to their endless red tape. And gradually Khanna seems to stray from his apparent desire to avoid criticising China and praise India: 'Whether by engaging in diplomatic niceties, exchanging Chinese weapons for oil and gas from pariah states, or investing in cobalt and copper in civil war-torn Central Africa, China leads with its wallet, unrestrained by politically correct norms of international relations' (p. 256).

Chapter 12, 'Film Stars and Gurus: Soft Power in Bollywood and Beyond' develops the theme of India's soft power with regard to Bollywood, Buddhism and Software. According to Khanna, India is replete with ambassadors of culture who do not follow a governmental plan. Conversely, 'China's disciplined approach to attaining power—and to my mind, there is much to commend about the discipline—whereby it declares quantifiable goals (like having five of the world's leading universities and twenty Fortune 500 firms), is palpable' (p. 260). But, by this point, Khanna's apparent distaste for the Chinese way is seeping from the shadows.

Viewed from my perspective as a German, it seems odd that the allegedly 'objective' Khanna is able to see so much of India as he twists his storytelling kaleidoscope. While the Indian film market may be twice as large as that of China, I know of fewer Indian films than Chinese movies. I am also familiar with more Chinese authors than Indian authors. Seemingly, the influence of Indian culture is more apparent in America than in Germany, especially in the area of Yoga or Ayurveda. Although they are pretty established in Germany as well, Jet Li—a Chinese martial arts actor—is certainly better known than the name of Chopra, the exporter of Ayurveda. But Khanna might not be convinced. For him, Indian culture glistens, while China comprises 'a society where creativity, freedom of thought, and intellectual activity had been comprehensively wiped out during the Cultural Revolution' (p. 273).

In Chapter 13, 'Buddha and Software: Old Links and New', Khanna returns to economic differences between India and China and how they improve their relationships through business. As mentioned in the introduction, he explains how Chinese are willing to learn from the Indian software industry. He also mentions how the Chinese Communist Party intervenes with religious leaders higher up the hierarchy. Additionally Khanna describes the historical Chinese/Indian alliances and the key players, such as translators, merchants, and pilgrims. He touches on the Opium Wars and the Indian role in them and how, nowadays, Indian software experts help the Chinese to construct an indigenous software industry. He also raises the question why India has failed to create a Chinese-style framework for learning, but he drifts in the direction of platitudes: despite profound differences in politics, distance no longer hampers scholarly, intellectual, and commercial cooperation. I felt the point of his argument slipping out of focus.

Chapter 14 'Corporate Bridges: Linking China, India, and the West' is developed from a story about America's GE. An intriguing story, but hardly appropriate to the challenge of explaining reshaped futures. Nevertheless, it is in the only chapter where the author goes into detail of an American/Indian/Chinese success story, i.e. a global American company that uses high quality Indian software and

high-quality Chinese hardware. The model marks the fusion of different comparative advantages. And it could be replicated as individuals and organisations straddle the China–India cultural divide: synergy should be a rich reward for those who see how to sustain critical connections. Naked greed on the part of those who simply seek to take can backfire: each side has to appreciate the other’s contribution. As his last sentence proclaims: ‘The crucial lesson of companies ... is that enlightened self-interest need not be a zero-sum game. That is the key to resilient bridges between East and West’ (p. 312). It might sound worthy, but was it worth reading the previous 300 pages?

While the Indian-born Khanna acknowledges a potential bias towards the country of his birth, he declares—at the outset—that on a rough count ‘half the chapters in the book end up showing China doing a better job than India’ (p. 21). However, the emotional slant you have at the end of this book is different. And the shift could reflect a nagging doubt signalled by the italicised ‘*and*’ in the title of Khanna’s introduction ‘Reimagining China *and* India’. Is Khanna worried that India will be washed aside by China’s *tsunami* of global hype? His intention was ‘to write a comparative book because I believe that we can better understand China’s choices when juxtaposed against India’s, and vice versa’ (p. 6): but does this make sense? If the differences dwarf the similarities, the logic of comparison could be compromised. Why should we assume that every salient feature of China could be compared, in a useful and meaningful manner, with an ostensibly equivalent aspect of India?

To be sure, reading the book has given me a clearer picture of India and I have a clearer picture of China now, but these images seem to emphasise colossal differences rather than useful points of comparison. Each chapter continually paints images of the two countries, but the language reserved for India typically warrants the best brush strokes. The longer you read, the more you have the feeling that Khanna wants to bring India closer to your heart: India deserves more attention and more sympathy. It should emerge from the shadow of its giant neighbour to prove to the world that, with a little support from the West, it can provide more stories of success and overwhelm with a hitherto unacknowledged capacity to compete and charm. But such sentiments do not sit easily with the book’s concern with ‘Billions of Entrepreneurs’. And the subtitle’s claim to explain ‘How China and India Are Reshaping Their Futures and Yours’ seems similarly extravagant. Yet, the book *is* eminently readable. The stories are told in a very sophisticated and enjoyable style. And there are numerous enlightening insights into the culture of both. A friend of mine is considering moving to China to start a business; I recommended this book to him.

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