

thoroughly and linked the technological subject matter with social, economic political and cultural aspects of society. The question of whether there is an information society is not answered and is not really relevant. Far more important are identification of the changes that have been and are occurring in our society due to information and information technology and what the future holds for us.

Martin has organised the material in the book in a logical, easy to understand format. The paragraphs and chapters flow into one another in a logical manner guiding the reader along the path he has chartered. He starts out dealing with basic definitions and discussions on basic concepts and then leads into existing and future information technologies. Debating whether information is a commodity, he explores the effect of information economics on the social, cultural and political areas of society. Building up from this background he assesses the impact of these changes on society. He then gives an overview of information-based industries and information management ending with a chapter on the global effects of the changes.

Martin expresses himself in a clear, concise manner. The book is easy to read without being too simplistic. His enthusiasm comes out when describing subjects such as convergence, and his sense of social justice appears frequently in his empathy for the developing nations and consumer rights. He presents the material in a straightforward, objective manner and does not advocate a particular theoretical or ideological point of view (which this reader finds refreshing). However, in chapter seven Martin has included a lot of industry statistics, which does not add to the value of the story and could just as well be left out.

When judging the success or failure of a book, one must consider the target audience and whether the author succeeded in his or her purpose. Martin's stated purpose was to relate the growth in communications, telecommunications and computing to global trends such as the demographic crises of over population, environmental challenges, biotechnology and north-south tensions and other social issues. He accomplishes this by constantly examining the social, cultural and political implications of various technologies throughout the text and by the way in which the material is organised. No writer can produce a book that pleases every person. Martin's book is outdated in some of its information, does not take an ideological stand, does not offer an in-depth analysis and assessment of the impacts of the changes in information and information technologies, and does not offer anything new for readers who are authorities in the field. It is, however, very well referenced, very comprehensive and informative, and provides the reader with a good background on the subject and directions for further study. It provides a good understanding of the processes of the information age and their impact on social structures. I recommend the book for students, first time readers and to lecturers as a text book.

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Borders in Cyberspace: Information Policy and the Global Information Infrastructure

Brian Kahin and Charles Nesson (Eds)

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The basis for this book can best be summed up by the ancient Latin proverb: *Occasio Facit Furem* (opportunity makes a thief). It is because of this that we have police, laws and

government. Governments and individuals do not always agree, however, thus we have many different governments and jurisdictions. We live in a world of nation-states, each sovereign in its own right and each exactly de-limited by borders. This system and its rules have developed slowly and often painfully over thousands of years. Now, in just a few short years, along comes the Internet and Electronic Commerce that suddenly and strikingly displays the inadequacies of this terrestrially based system of laws.

Borders in Cyberspace discusses the 'opportunities' for misdeeds on the Internet and the various ways in which the present system of laws and justice are inadequate to deal with them. From the outset the book clearly establishes the notion that 'cyberspace' is a place, or rather, it should be treated as one that is distinct from any other, just as countries are distinct from one another. It argues that traditional laws cannot readily be applied and that new rules and laws need to be developed for this place, as well as a system of governance, enforcement and dispute resolution.

The book is made up of 12 excellent chapters covering some of the most visible aspects confronting lawmakers in this world of cyberspace. It has been compiled by the newly established Centre for Law and Information Technology at the Harvard Law School in collaboration with the Science, Technology and Public Policy Program, the Centre for Business and Government at the John F. Kennedy School of Government, and the Global Information Infrastructure Commission. The book marks the public debut of the Harvard Centre and due to its quality, should form the basis for future work in this important area. Interestingly and entirely appropriately for a book of this kind, all of the authors' e-mail addresses and Web sites are included at the end.

The book is divided into two discrete sections, prefaced by the editors Brian Kahin and Charles Nesson. The first section, entitled 'Life and Law on the Frontier', discusses the nature of cyberspace and its characteristics in terms of globalisation, democracy and commerce. It also analyses the 'process' issues raised by cyberspace such as jurisdiction, conflict of laws, extraterritorial enforcement and effect, harmonisation, and alternative dispute resolution. The second section of the book, entitled 'Issues Across Borders', tackles some of the trans-border problems cyberspace has created in areas such as intellectual property, censorship, privacy, cryptography, government information and consumer protection.

The first chapter, by David Johnson and David Post, sets the stage for the book by arguing that cyberspace should be treated as a separate place with borders de-limiting its operation. It should thus be entitled to form its own jurisdiction and the authors exemplify this with examples of how traditional jurisdictions are difficult to apply to the Internet and almost impossible to enforce. By far and away the most important point made here is that because physical location in cyberspace is irrelevant, how does one determine which jurisdiction should apply? If one country should exert its control over the Internet, because of its global presence, then all other countries should have the right to do the same. They use examples of the variance in trademark law from country to country to show how unworkable this has become. The authors propose a new jurisdiction for the Internet, with rules that will be different from land-based laws, which would primarily be self-regulatory and consensus driven.

Ingrid Volkmer, in the second chapter, places the Internet in the broader context of global communications, which also includes the broadcast media. She raises the problem of cultural sovereignty and global information flows. The Internet has become a global marketplace not only for goods and services, but also for the news media and information. Given that access from anywhere means access to everywhere in cyberspace, centralised global media conglomerates are changing the way news is delivered. Worldwide cybercasting represents a new phenomenon where the public

is treated as a global homogenous group, instead of made up of regional and cultural diversity. Volkmer's piece provides an interesting summary of the differing global networks that have emerged, many of which are unlike their traditional predecessors. For example, she explains how Reuters has been transformed from a direct news service into a news wholesaler and the New York Times syndicate, previously confined to print media, now has 15 constantly updated web-sites around the globe. Information is increasingly being commodified, which she argues leads to a decline in traditional cultural values.

The third essay, by Joel Reidenberg, extends the first chapter by calling for recognition of Internet and other networks as semi-sovereign. The Global Information Infrastructure (GII) poses challenges to the fundamental foundations of government. National borders lose their importance in cyberspace, while network borders gain prominence. He argues that a new network governance must emerge that can cope with the complexity and shifting power bases of the Internet and shift the role of the state toward the creation of an incentive structure for network self-regulation.

Christopher Kedzie talks of a 'coincidence of third waves', by which he essentially means dramatic changes. He bases this article around the argument that the increases in global communications and the free flows of information are leading to a more democratised world. He uses statistical analysis of the correlations between e-mail and democracy to conclude that indeed '[these] tests ... consistently verify that interconnectivity is a powerful predictor of democracy, more so than any of democracy's traditional correlates' (p. 125).

Chapter 5, by Michael Froomkin, takes up the issue of censorship and the Internet as a source of regulatory arbitrage. Essentially, most attempts at control have been fruitless he argues because the Internet is like the fabled Hydra, you cut off one head and another appears. He explains the technical details of how the use of packet switching, cryptography and anonymity keep the 'hydra' alive in the face of pressures from central governments and regulators. He argues that these issues pose consequences for the physical system in terms of tax evasion, sensitive data flows across borders, and the ability of consumers to choose products offered beyond national borders. This will be most significant when the product or service is primarily information based; where they involve physical goods the effect may not be that dramatic. Finally Froomkin supports Kedzie's assertions that the Internet promotes democracy and liberal values over all else.

The last chapter in Section 1 tackles the legal aspects of jurisdiction in cyberspace. Henry Perritt conjures an interesting quandary of the legal problems with cyberspace—whose jurisdiction applies to a defamatory message that is written in Mexico, read by someone in Israel, by means of a server in the US, that injures the reputation of someone in Norway? He explores the jurisdiction of the courts in their ability to prosecute issues arising from the Internet. It has been the case recently that intermediaries, such as Web Servers have been hauled through the courts, because they are the most tangible actors and the ones that provide or host web content. This is a contentious issue to say the least and Perritt, through analysis of the current inadequate structure, proposes the formation of other intermediaries to act as arbitrators and regulators. In this, he cites the development in the US of the Virtual Magistrate Project and the progress needed to be made in the international court of justice and extradition treaties that may have to provide punitive penalty support to the cyber judge.

Whereas the first part of *Border in Cyberspace* deals with the general issues of the law and the Internet, Section 2 gets to grips with six particular issues.

Firstly, a chapter by Dan Burk takes a look at the issue of data piracy, where opportunities for the thief abound and the chances of getting caught are slim. He does

not go into the detail of what or how these pirates steal data. He offers, through theories on public goods, competition and public choice, an argument that the Internet will provide for international competition and the strengthening of international copyright law and intellectual property rights and the role of the World Trade Organisation.

Victor Mayer-Schönberger and Terece Foster discuss free speech and the GII. They highlight the national need to limit free speech in socially unacceptable topics such as libel, pornography, subversion, abuse and obscenity. They observe governments attempting to impose these social values of acceptability onto the Internet and thus other nations and societies. They conclude that the only way forward is the development of international agreement on a basic *Jus cogens* legal document that limits free speech regulation to the most specific and defined areas of human rights denials including slavery, genocide, torture, etc. They hope that the international cooperation involved would lead to regulation that would be both feasible and sensible.

Robert Gellman discusses the issue of privacy in the context of the growing mass of data in cyberspace. He notes that national government efforts to protect personal data have increased greatly with the rise of electronic databases in the last 20 years. Certainly the rise of the Internet has increased the uncertainty over what corporations and individuals may do with personal information and questioned the ability of countries to regulate the use of its citizens' information. He argues that overt international laws to protect privacy will be impossible to attain or enforce, rather Gellman argues for the encouragement of self-regulation and cooperative privacy codes as the way forward.

Encryption of information over the Internet is tackled by Richard Barth and Clint Smith. They compare the policies of the US, France, Russia, China, Israel and Japan. Essentially governments are concerned about encryption because of its ability to diminish national security. Cryptography is thus regulated by many states in the three areas of import controls, export controls and use controls. However, due to the rapid growth in the sophistication of cryptography and the wide access to them via the Internet, controls have become ineffective. The authors conclude that governments will lose all controls on encryption unless an immediate international consensus is reached.

Peter Wiess and Peter Backlund discuss the role of government information policy. There are calls in many nations for open and unrestricted access to government information, and it can be argued as a basic tenet of society. Many governments, however, are reluctant to fully provide for this for national security, cost and efficiency reasons. Some argue for the commercialization of government, seeking to derive revenue from its data. Wiess and Backlund use the example of meteorological data, which traditionally was offered for free as a social service. The UK, for example, is now charging for it. They conclude that the desire for governments to commercialise is increasing but warn that free flows of information are crucial for science, environmental research and commerce.

The final article, by John Goldring, discusses the cyberspace phenomenon from the point of view of consumer protection. Yet again here is an area where present national laws remain inadequate to deal with the potential problems in electronic commerce. Goldring postulates on the lack of recourse for consumers purchasing goods or information over the Internet, especially since the geographic origin of the provider may be unknown. He uses examples from the Australian consumer law perspective. Goldring concludes that market forces and consumer confidence may well prevail in the long term to drive out the cybershark. However, he argues that the nation-state regulatory system is the best we know of and national regulation must be implemented to protect consumers against the unscrupulous predators lurking in the ether.

Borders in Cyberspace is a comprehensive work on some of the difficult issues facing the

entire world relating to the safe, fair and equitable operation of this new frontier called the Internet. The book is a worthwhile read for anyone interested in the Internet and electronic commerce and I would say it is a must for anyone involved in the policy or commercial arena of cyberspace. I'm sure this book will become a foundation for much further work in the development of new laws and regulation of the Internet.

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