

Book Review

Information Markets: A Strategic Guideline for the I-Commerce. Frank Linde and Wolfgang G. Stock, Berlin, Germany: De Gruyter Saur, 2011. pp. 617 \$90. (ISBN: 978-3-11-203609-5)

Information Markets: A Strategic Guideline for the I-Commerce is the fourth monograph published by De Gruyter Saur as part of its Knowledge and Information book series (ISSN 1868-842X). Comprising 26 chapters, the book itself is well constructed. Although no table of figures is provided, the authors include a glossary of terms, an index of names, and a subject index. Bibliographies are offered at the end of each chapter. According to the authors, one an economist and the other an information scientist, the book is targeted at both academics and students in each of their respective disciplines, as well as computer science. The authors also believe that their work could be of interest to professionals in information markets. Paul Becker translated the original German text into English.

As the title suggests, the authors task themselves with elaborating and interrogating the nature of digital economic goods and information markets specific to “I-Commerce,” which they define broadly as trade with digital information. In their own words, “*Information Markets* is a comprehensive overview of the state of the art of economic and information-scientific endeavors on the markets of digital information-software as well as content” (p. xx). In developing their arguments, the authors are guided by five research questions. First, what characteristics does digital information display as an economic good? Second, what is the broader structural context in which information markets are embedded? Third, what types of digital products are exchanged in information markets? Fourth, what types of strategies do sellers avail themselves of in information markets? Fifth, how does piracy affect information markets? The book is organized into five sections that address each of these five questions in turn.

Given the subject matter of the book, the authors devote the first three chapters to an articulation of the genesis of the concepts of knowledge/information economy and information markets, as well as an elaboration of the characteristics and peculiarities of information as an economic good. In operationalizing the term “information markets,” the authors articulate two key characteristics: information is digital, or at least potentially can be digitized, and information is exchanged through digital networks such as the Internet. This definition also serves to delineate their work from others that treat e-commerce, which can encompass nondigital goods. Linde and Stock, in contrast, consider exclusively trade in information. In defining information, the authors contend that it should be conceptualized as knowledge set in motion. Somewhat tautologically, knowledge, in turn, is conceived broadly to encompass implicit and explicit, subjective and objective, scientific, and every-day knowledge (p. 4). Although some might be left unsatisfied by such a shallow treatment of the conceptual distinction between information and knowledge, it does not detract substantially from the overall goal and content of the work. Linde and Stock trace the origins of debates about knowledge/information workers and knowledge/information society to the work of Peter Drucker and Fritz Machlup

in the United States and Tadao Umesao and Yujiro Hayashi in Japan in the 1960s; however, the authors concentrate mainly on Drucker and Machlup, followed by Porat’s work in the 1970s. Given that the next section of the chapter interrogates the sociology of the information society, it is a little curious that Bell’s work is accorded only a cursory mention. In any event, the authors also rightly point out some of the weaknesses of Machlup’s and Porat’s work, which has been critiqued by a number of other writers. Moving on to the conception and development of “information superhighways” in the United States and the European Union, the authors complete the chapter by walking the reader very briefly through discussions of the rise and fall of the bubble associated with the “new economy” in the late 1990s, digital services, and m-commerce (mobile), to situate what they perceive to be our current conjuncture and the subject of their study: the information market.

In further setting the context for their work, the authors dedicate chapters 2 and 3 to a discussion of economic goods in general, and information goods in particular. Their elaboration of the peculiar characteristics of information goods demonstrates why such products pose challenges for classical economic theory and property theory as traditionally applied to tangible goods. Some of these arguments, including the nonrivalrous, nonexclusive, and public good nature of information, will no doubt be familiar to many library and information science (LIS) scholars and practitioners. The economic arguments, particularly those in respect of pricing and information asymmetries, are presented in a relatively comprehensible manner for noneconomists. In their discussion of network effects, or externalities in typical economic terms, the authors distinguish between direct, indirect, and what they term “two-sided” network effects. This is an important foundational element for their later interrogation of the different types of information goods (Part C), the competitive strategies available to information providers (Part D), and the effect of piracy on information markets (Part E).

Part B, “Information Society,” comprises three chapters about the sociological aspects of information and information society, information law, and information ethics. The chapter on information sociology draws on Kondratieff’s notion of prolonged cycles in capitalist economies and the subsequent reworking by Schumpeter, who posited that technological innovation was the critical explanatory variable for economic growth. The authors then proceed to consider, albeit rather uncritically, notions of the knowledge society and its attendant emphasis on scientific and technical knowledge, as well as the importance of life-long learning. Drawing on figures from the Human Development Index and the Information and Communications Technology (ICT) Development Index, Linde and Stock then posit several correlations between a country’s level of development, as measured by the Human Development Index, and the level of development of an information society, as measured by the Network Readiness Index. Reminiscent of some of the weaknesses in Machlup’s and Porat’s work, the reader is left unconvinced that these indices are appropriate indicators of the information society. Even less convincing is the subsequent discussion (pp. 86–7) about the possible influence of the Catholic Church and proximity to important seaports on these indicators. This chapter also touches on Castell’s notion of the “informational city,” the digital divide, deviant information behavior (cyberstalking, cyberbullying, and online fraud),

information subcultures (hackers, crackers, and crashers), the “Dark Web” and terrorism, and political issues such as eGovernment and universal service.

Chapter 5 outlines various intellectual property mechanisms, including patents, copyright, and trademarks. Given the geographic location of the authors, it is not surprising that most of the legal discussion references German laws. That having been said, the general conceptual discussion of these intellectual property tools is relevant to the American context, which does receive some treatment in various places. The authors also discuss, albeit very briefly, the Creative Commons and copyleft alternatives to traditional copyright protections, as well as personal data protection laws.

The final chapter of Part B on ethics opens with the very bold claim that “[t]he knowledge society forms an entirely new culture” (p. 160). Although the reader is at first left with the impression that the authors reduce information ethics to concern about laws, they do go on to elaborate issues in respect of professional behavior, access to knowledge, privacy, and the normative foundations of intellectual property. Unfortunately, the treatment is uneven and cursory in places, particularly the elaboration of the typical justifications of intellectual property rights (consequentialism, labor theory, and personality theory). The authors also demonstrate a tendency to underplay some of the critical work within the extant literature in respect of the sociology of information and information ethics. For example, while they reference Frank Webster’s work, they fail to convey the very critical perspective this theorist brings to debates about the information society. Although the authors articulate in their second research question the need to elaborate the social and legal environment in which information markets are located, this section fails to advance in any significant way the more important discussion that follows in the next three sections. Although some context is appropriate, in a book of this already substantial length, this goal could have been accomplished by collapsing the pertinent discussions into other suitable relevant chapters.

Part C, “Digital Information Goods,” begins excavating the more interesting and novel content of this book. Each of the nine chapters included in this section is dedicated to elaborating the various digital products the authors consider most relevant to information markets and i-commerce. Beginning with business, market, and press information, the authors move the reader through discussions of legal information, scientific, technological and medical (STM) information, search tools and content aggregators, Web 2.0 services, online music and Internet television, digital games, software, and online advertising. In addition to articulating the types of content and services that fall within the rubric of each of these categories of information products, the authors analyze the typical customer base for each type of information and the various pricing and revenue generation strategies employed by the different information providers. Although all of these chapters should be of interest to LIS scholars, students, and practitioners, the chapter on STM information is particularly germane given its discussion of the anemic flow of information across national and language borders, journal impact factors (including some of their methodological shortcomings), e-books, digital object identifiers, and the STM market. The chapter on Web 2.0 services draws very briefly, and somewhat unconvincingly, on Tönnies’ distinction between *Gesellschaft* and *Gemeinschaft* to ground the analysis in a sociological context. More convincing is the application of the concept of “prosumer,” although, here again, some of the critical implications of Toffler’s celebrated merging of production and consumption remain unarticulated. For the uninitiated, the chapter on software provides a useful overview of software development processes. The final chapter in this section, which treats online advertising, offers an illuminating explanation of how providers of free content and services (such as search engines and Web 2.0) generate revenue. Although most readers are probably aware that the providers of these services and content are selling “eyeballs” to advertisers, how the actual process functions may be less known.

Having articulated these various information market goods, the authors turn, in the following section of the book, to an examination and analysis of the competitive strategies information providers avail themselves of to sustain their businesses in information markets. The authors contend that the strategic behavior of a company exerts a critical influence on stakeholders (e.g., a customer base, suppliers) and the various mechanisms (e.g., network effects) that operate in information markets. Drawing extensively on the work of Michael Porter (1980) and Carl Shapiro and Hal Varian (1999), the authors articulate and analyze, in separate chapters, seven strategic variables of critical importance to information providers in designing and navigating their “value nets,” or business field; this latter concept is adapted from Brandenburger and Nalebuff (1996). The strategic variables beyond product quality that the authors consider most important to achieving such things as market share, brand recognition, and profits include timing of market entry, pricing, compatibility management (standardization), complement management, copy protection management, signaling, and lock-in management.

The chapter on timing of market entry offers a detailed analysis of the potential benefits and disadvantages of being a first or second mover on information markets. The chapter devoted to pricing offers advice about product and price design that accounts for the characteristics of information goods articulated earlier in the book, such as high fixed and low variable costs, information asymmetries, the ease of digital reproduction, and network effects. As might be expected given its subject matter, this chapter contains the deepest economic treatment, particularly in respect of marginal costs and price differentiation. The chapters on compatibility standards and lock-in management on information markets will, no doubt, resonate with LIS scholars and practitioners grappling with some of the licensing, bundling, and technical issues that attach to digital sources. The chapter on copy protection management elaborates the advantages and disadvantages of digital rights managements systems for information content and service providers. Although the authors’ claim that the increasing ease of digital reproduction of information goods provided a fundamental impetus for more stringent intellectual property rights occludes several critical political economic motivations, they do develop an interesting and no doubt provocative argument that strict copy protection control might not always serve the best interests of digital information providers. Indeed, in foreshadowing the discussion articulated in Part E, Linde and Stock demonstrate that piracy (although their preferred term is bootlegging) in the digital realm, because of positive network effects, does not necessarily affect all information markets negatively. In fact, in some instances piracy might be beneficial.

Indeed, the final section of the book, “The ‘Illegal’ Information Market: Piracy,” provides an empirically grounded, novel analysis of the effects of noncommercial unauthorized copying and distribution on information markets. The possible exception might be the section’s first chapter on motivations for consumer piracy, which is not completely convincing. Aside from being harsh, the claims that young, male students represent the largest percentage of bootleggers, that this demographic possesses “an underdeveloped set of morals” (p. 542), and that film bootleggers engage in illegal downloading to “avoid incurring undesirable social sanctions for deviating from the group norm” (p. 543) appear to rest on a limited number of studies. These concerns notwithstanding, the chapter on the economic consequences of piracy offers welcome evidence that contradicts the dire claims advanced by some of the leading music and film industry groups about the loss of revenue and detrimental impact on creative production caused by piracy. According to Linde and Stock, there is no evidence that the creative output of artists has diminished as a direct result of file sharing. Instead, noncompensated file sharing actually helps lesser-known artists and can generate complementary sources of revenue (e.g., increased concert revenues) that more than offset any reductions in album sales. In the final chapter of the book, the authors draw once again on several of the strategic variables outlined in Part D to demonstrate how they might be applied by information providers to

develop new business models capable of responding to and benefiting from piracy.

I suspect that for LIS readers, Parts C through E will be the most novel and relevant parts of the book. That having been said, the translation from German into English is clunky and imprecise in several spots throughout the work, beginning with the title. Although this imprecision never seriously detracts from the arguments the authors seek to advance, it sometimes makes for a frustrating read. Also potentially problematic for English audiences are the many screenshot figures that appear in German. Although presented in a logical order, it might have been useful to provide brief, separate introductions and conclusions to each of the five sections of the book to set signposts and explicitly integrate the chapters with overall themes and research questions driving the book. These concerns and those articulated above notwithstanding, the book treats important aspects of information markets from novel perspectives that are both timely and relevant to LIS. As such, it warrants a place in individual and institutional collections.

References

- Brandenburger, A.M., & Nalebuff, B.J. (1996). *Co-opetition*. New York: Doubleday.
- Porter, M.E. (1980). *Competitive strategy: Techniques for analyzing industries and competitors*. New York: Free Press.
- Shapiro, C., & Varian, H R. (1999). *Information rules: A strategic guide to the network economy*. Boston, MA: Harvard Business School Press.

Wilhelm Peekhaus

*School of Information Studies, University of Wisconsin
Bolton Hall 5th Floor
3210 N Maryland Ave.,
Milwaukee,
WI
53211
E-mail: peekhaus@uwm.edu*