Books remain a primary means of communicating knowledge. They are central to providing information, entertainment, analysis and education to millions throughout the world. In 1991, UNESCO statistics - which give only a very rough impression of the real situation - indicate that 863,000 separate titles were published worldwide. There are, in addition, more than 9,000 daily newspapers and at least 50,000 periodicals that focus on science and scholarship. Despite the advent of new technologies for knowledge distribution, such as the Internet and other computer-based innovations, traditional books and newspapers are the primary source of information. Indeed, the number of titles published continues to increase steadily. This essay focuses primarily on book publishing and will discuss the nature of the publishing enterprise as well as current challenges facing publishing worldwide.

Although fairly insignificant in terms of economic impact, publishing is of central importance to the cultural, intellectual and educational life of a nation. The development and dissemination of knowledge products is a matter of the utmost importance for any civilization.

Technological change is having an impact on publishing that is unrivalled since the Industrial Revolution in the nineteenth century affected the composition and printing of books and permitted a mass market for books to emerge. Simultaneously in Europe and North America rates of literacy rose and incomes increased to create an unprecedented market for books. The strengthening of copyright, and the expansion of bookstores and public libraries, resulted from this important combination of factors.

It can be argued that the end of the twentieth century is seeing a similarly profound transformation of publishing. A combination of technological factors, linked in different ways to the computer as well as to new developments in reprography, is changing the industry. Economic changes, including the multinationalization of major publishing firms...
and the linking of publishing to other knowledge and entertainment industries, are also altering the landscape of books and publishing (see Chapters 20 and 21).

Books are the oldest communication technology, dating back to Johannes Gutenberg's invention of movable type in 1455 (Gutenberg is generally credited with this invention which made modern printing possible, but movable type first appeared in China around 1100 and then in Korea a half-century before it was invented in Europe, although there seems to be no relationship between these inventions). Books have many advantages: they are portable and do not require sophisticated technology for use. The technologies needed to produce books, such as printing presses and composing equipment, are widely available, not very expensive and within the reach of most countries. Similarly, paper and other raw materials needed for book production in general are readily available, although the price for the quality of paper needed for printing books tends to fluctuate greatly. New technological innovations, such as computer-assisted desktop publishing and reprography, have reduced the cost of producing books in areas where these technologies are available. Books are also distributed fairly easily, and infrastructures for book distribution - through bookstores, direct mail, educational institutions and the like - exist in the industrialized world, although distribution problems remain in the developing nations. While book production requires some capital, the investment needed is relatively modest and it is possible for small publishers to get established and survive. Because of the relatively modest investment needed for book production it is possible for limited editions to be published and small audiences to be served, although publishing for limited markets inherently is not very profitable. Book publishing is feasible, although not usually very profitable, in languages used by small populations and in scripts that are not widely employed. The traditional book is a unique product that has withstood the test of time and will remain, despite the challenge of the new technologies, a primary means of communication into the future.

Our concern here is with publishing - the process of co-ordinating the various processes needed to bring a book from an idea in the mind of the author to a printed product available for distribution to the relevant audience. We do not deal in detail with printing, the paper industry, legal aspects of copyright (see Chapter 26) or the technical aspects of the new computer-based innovations in composing books. Publishing, at its heart, is the co-ordination of the multitude of activities needed to produce books. Publishers seldom own printing presses, bookshops or distribution agencies. Their expertise is in the selection and editing of manuscripts, and planning and supervising the process of transforming the manuscript into a book, and then ensuring that this product reaches its intended market. Marketing and sales are an essential part of the 'publishing chain'.

Publishing faces significant challenges at the end of the twentieth century. New technologies have transformed many of the processes of book publishing and distribution. This is true not only for composition and printing, but also for knowledge transmission itself. The Internet, for example, is being used in many different ways for publishing. Changes in the commercial underpinnings of publishing have significantly altered the traditional economics of the industry, especially through the consolidation of firms and the entry into publishing of multimedia corporations (see Chapter 21). Publishing has also become more international, not only through the export of knowledge products, but also in terms of multinational ownership of firms. We shall focus on some of the dramatic changes in publishing which are transforming the underpinnings of what was a traditional industry - a 'profession of gentlemen' - into the highly competitive, commercial and technological environment of the twenty-first century.
In economic terms, publishing is of limited importance. The total turnover of the publishing industries of major industrial nations ranks below many consumer-based industries, such as, for example, breakfast cereals. Yet publishing is of immense cultural and educational importance. It is also a central element in the emerging nexus of knowledge industries that are so important to post-industrial societies. It is not surprising, therefore, that the international regulation of knowledge industries was an important and controversial part of the recently concluded negotiations that led to the formation of the World Trade Organization (WTO). Issues relating to the piracy of knowledge products, including books, were at the heart of a highly visible trade dispute between China and the United States (see Chapter 21).

The creation and ownership of knowledge products are of increasing importance because of the centrality of information and knowledge to post-industrial economies. The concept of copyright, originally intended to protect authors and publishers of books, has broadened to include other knowledge products such as computer programs and films (see Chapter 26). Copyright has emerged as one of the most important means of regulating the international flow of ideas and knowledge-based products, and will be a central instrument for the knowledge industries of the twenty-first century. Those who control copyright have a significant advantage in the emerging, knowledge-based global economy. The fact is that copyright ownership is largely in the hands of the major industrialized nations and of the major multimedia corporations placing low per capita income countries as well as smaller economies at a significant disadvantage.

Centres and peripherals in the knowledge system

Books and publishing are not equally distributed throughout the world. A small number of countries and languages dominate world publishing, creating patterns of considerable inequality in world publishing. France, Germany, Japan, the United Kingdom and the United States are among the top publishing countries. These nations, joined by China, Egypt, India, the Russian Federation, Spain and several others are responsible for a significant proportion of the world's book production. A few smaller countries produce large numbers of book titles when compared to their populations. Denmark, Iceland and Israel, for example, produce more titles per capita than such major publishing nations as the United States or France. The United States, United Kingdom, France and, to some extent, Spain are especially important in world publishing, since they publish in languages used internationally, and the majority of the major multinational publishers are based in these countries. They constitute the main international centres of publishing and have considerable influence beyond their borders.

A second rank of countries have active and in some cases powerful publishing industries. Germany, Italy and Japan, for example, are major publishing nations, ranking in the top ten in terms of annual title production; all three have major multinational publishers with a global reach. The largest publisher in the United States is German-owned Bertelsmann Verlag, which controls a number of major American publishers. The Italian publisher, Mondadori, is an important influence in Spanish and Latin American publishing, and such Japanese publishers as Kodansha have an international reach. The export potential for books in German, Italian and Japanese, however, is limited. These three countries have fully independent and autonomous publishing industries, although they are affected by some trends from the major world centres of publishing (for example, best-sellers from the United States often appear on the lists of these countries but rarely does this influence work in the opposite direction).

A third category of publishing nations is made
up of several large, relatively low-income producers of books. These countries tend to be more dependent on the major industrialized publishing nations, and in some cases serve as regional centres with strong ties abroad. China, India, Egypt, Mexico and Argentina fall into this category. All have strong local publishing industries and infrastructures of book production – publishers, printers, paper supplies, etc. All except China have strong markets for their books beyond their borders: Egypt, Mexico and Argentina are especially important as regional centres and have strong export markets. Egypt, for example, is the dominant publisher of books in Arabic, and the rest of the Arabic-speaking world depends on Egyptian books. Similarly, Mexico and Argentina dominate Latin American publishing in Spanish. These three countries serve as links between publishing in their respective languages and the world centres. China and India provide further variations on the theme. Their huge internal markets make them major book publishing nations. Both also have modest export markets; India, especially, exports books to other developing nations and is a major publisher of books in English (ranking third in this category after the United States and the United Kingdom) as well as in India's fifteen indigenous languages. These countries rely to some extent on the major world centres of publishing for books to translate, and sometimes for investment capital and other resources.

Much of the rest of the world is peripheral to the major centres of publishing. Most of Africa, for example, has only limited publishing capacity. Francophone Africa, especially, depends largely on France for books of all kinds, and there are only a few local publishers. With the exception of South Africa, and to a lesser extent Nigeria and Kenya, African nations produce few books and their publishing industries are largely limited to textbooks for schools. The situation is similar but not as desperate in smaller and quite low per capita income Asian and Latin American countries such as the Lao People's Democratic Republic, Myanmar, Bolivia and El Salvador. For a significant part of the globe the term 'book hunger', coined in the early 1970s to dramatize the situation in much of the developing world, remains valid. Low literacy rates, lack of capital for investment and the absence of the basic infrastructures for publishing all inhibit the development of a successful book industry.

Smaller industrialized nations also find themselves dependent in terms of publishing, since local markets are so small that many kinds of books cannot be economically published. Wealth and high literacy rates do not guarantee a successful book industry. Even countries such as Denmark and Sweden, that have a fairly strong local publishing industry, import many books from abroad. The Netherlands, which not only has a significant domestic publishing industry but is the headquarters for several successful multinational publishers, depends on foreign books to a significant extent.

The publishing industry must be seen in the context of a worldwide knowledge system that is characterized by considerable inequality. Population, literacy rates, the use of a 'world language', income levels, the existence of publishing infrastructures and a history of active publishing all contribute to determining the strength of a publishing industry. Patterns of worldwide ownership of publishing and other knowledge-based firms, government policy and flows of international trade may also contribute to the success of the publishing enterprise in a country. Centres and peripheries exist in publishing, and these relationships help to determine the place of a nation in the world of knowledge creation, distribution and use.

**Current issues**

Publishing faces a range of contemporary challenges that have a profound impact on the nature of the industry, and indirectly on the ways that books are
produced and distributed. This section focuses on the most important issues affecting publishing today.

**The impact of new technologies**

Two basic technological developments are affecting publishing. The first is the reprographic revolution initiated by photo-reproduction technology. This technology has stimulated not only the ubiquitous photocopy machine, bringing challenges to copyright, but has introduced innovations in printing. Computers have profoundly affected publishing in book production, distribution and, perhaps most important in the long run, the storage and retrieval of knowledge.

The reprographic revolution started several decades ago. At first, photocopying permitted individual readers easily to make copies of printed materials. This was followed by commercial enterprises making unauthorized copies of published material. The cost of photocopying machines and the cost of making copies declined and such machines became increasingly affordable. Reprographic technology was soon harnessed to printing. This permitted significant economies in printing costs, especially for limited press runs. Suddenly, it was economically feasible to print small numbers of books for specialized audiences. It became possible to print books in languages spoken by small populations. Recent reprographic advances, linked to computer composition, permit even greater economies in the production of printed materials. Presses based on advanced photocopy technology can print small numbers of books very quickly and inexpensively. It is even possible to print single copies for individual users through this technological application. This has assisted publishers in countries and regions, and in languages, which have only small markets.

At first seen as a challenge to traditional publishing, the reprographic revolution was successfully exploited by publishers. Problems remain, but overall the publishing industry has accommodated to new developments. Reprographic technology has been linked to printing to reduce costs. The challenges to the copyright system, however, were, and remain, considerable (see Chapter 26).

Of greater importance to publishing than reprography is the revolution based on the computer. Traditional composition technologies have, in much of the world, been replaced entirely by computer-based composition and book design. This has revolutionized the physical design of books and led to the development of desktop publishing, a term that refers to the creation of composed text through the use of personal computers. Sophisticated software programs exist for book preparation and design. Many languages using their own unique scripts have benefited from computer-based typesetting. Computerized book design and preparation has dramatically lowered the cost of composition, and has also decentralized it. Publishers or authors now have the capacity to carry a book through from manuscript to ‘camera-ready copy’ prepared for printing.

The computer has also changed business procedures relating to inventory control, billing and tracing trends in the sale of specific titles. Software programs permit publishers to reduce the cost of the business processes of publishing, allowing tasks that in earlier periods constituted a significant expense now to be performed quickly in-house. This application of computer technology has also enabled small publishers to operate efficiently in ways that in earlier times could only be done by large firms through economies of scale. Computer technology has also permitted the effective use of targeted mailing lists, specialized publicity campaigns and the like.

A final and tremendously important use of computer technology is for the delivery of printed material to readers. This application of technology, linking computers via the Internet as well as other alternative means of document delivery, has profound implications for publishers. This aspect of
computer-based technology is in a relatively early stage of use, but it will soon have widespread consequences for publishers, libraries, and bookstores. It is possible to deliver documents through the Internet, and publishers are developing the technologies to supply materials this way. Some scientific journals are already distributed exclusively on the Internet, and publishers are increasingly using the World Wide Web and other electronic means to publicize books and journals (see Chapter 18).

Aside from the technological challenges, a range of other problems are associated with this technology. The impact on copyright of Internet transmission remains both controversial and unclear. The means of obtaining payment are not yet fully defined. The use of library and other networks for distributing published material raises copyright and economic challenges for publishers. The problems that the new technologies create regarding copyright and financing are complex but the information industry is currently developing solutions that will permit new means of access to published material (see Chapter 26).

The traditional role of the publisher in this new technological universe may change, as the definition of the book is altered and the means of distributing knowledge is linked to new technologies. Without question, the technological innovations are of profound importance to publishers and to the book industry.

The control of publishing

Publishing is undergoing unprecedented economic change. There is a clear trend toward consolidation in the publishing industry as large publishing firms acquire smaller ones and as media corporations move into publishing. Large publishers in the major industrialized countries have in the past two decades become giant multinational firms. Bertelsmann Verlag of Germany now owns publishers in most European nations and in the United States; Hachette in France, Mondadori in Italy, Reed in the United Kingdom, and Elsevier and Kluwer in the Netherlands are other examples of publishers that have a worldwide presence. In the United States, for example, there were 573 mergers and acquisitions in the publishing industry between 1960 and 1989, and over half the market share is held by the top fifteen firms. Other major industrialized nations show similar trends.

The multinational publishers have also moved into smaller book markets, purchasing firms and establishing branches. These firms, because of their economic and staff resources, and their global reach, can dominate publishing in many developing countries. For example, French publishers have traditionally held a powerful position in francophone Africa, and British firms are re-entering some of the anglophone African markets that they abandoned in the years following the end of colonialism.

At the same time, new technologies, the development of 'niche markets' that had been abandoned by the large firms, and increasing specialization in the book industry have permitted small firms to survive and even prosper in a market increasingly dominated by giant multinational companies. The small publishers can make use of desktop technology, computer-based direct marketing and new printing arrangements that permit economical limited printing. This situation also has potential for publishers in small markets and in developing countries, although limited access to the new technologies hinders success in developing areas.

Copyright

A more detailed analysis of current copyright issues is presented in Chapter 26, but it is important to note here that copyright has special importance for book publishing at this time. While traditional copyright is more widely accepted than ever internationally, and the piracy of books is, comparatively speaking, at a lower level, technology and the multinationalization
of publishing have created significant challenges for copyright. While books continue to be pirated in a small number of developing countries without significant publishing industries, virtually all countries have signed the main international copyright agreements, and generally observe copyright. Nations such as India, which at one time were critics of traditional copyright and engaged in some book piracy, now support copyright, in part because a local publishing industry has developed that benefits from copyright protection. Among major publishing nations, it seems that only in China is there significant book piracy, and even there compliance is increasing.

Copyright, of course, protects the owners of intellectual property and sometimes makes it difficult for people in countries that have limited purchasing power and few publishing resources to obtain access to books. Copyright, in this respect, reinforces a system of knowledge inequality and creates a kind of monopoly dominated by the owners of knowledge. The copyright system works against those who have least to spend on books and other knowledge products, and those who are consumers rather than producers.

We have seen a strengthening of the copyright system. Publishers in the industrialized nations are increasingly insistent on protecting their rights and their economic benefits. There is little willingness to give 'have not' nations special access to books, and the recent negotiations that established WTO provided special protection to knowledge products and further strengthened copyright.

The varieties of publishing

It is very difficult to generalize about book publishing as it is an industry characterized by major variations. Publishers differ in size, scope, focus and orientation. However, it is worth briefly discussing several of the major types of publishing. In most countries, textbooks constitute the largest and in many cases the dominant segment of publishing. In developing countries, textbooks form the economic basis of the entire industry, and without this market publishers would find it difficult to survive. Indeed, textbooks and other materials published for schools and other educational institutions constitute the large majority of books published. Publishers in industrialized nations are less dependent on the educational market, although textbooks are important worldwide as an economic mainstay of the publishing industry.

Reference and scientific, technical and medical (STM) publishing is also a major sector of publishing. Publishing in these areas is important not only because it constitutes a major segment of the market but because these books contribute to science, scholarship and knowledge. Unlike textbooks, which are in general published for use within one country, reference and STM books have a wide export market. Publishing in these areas is heavily dominated by the major industrial nations which produce most of the scientific research and which also constitute the major markets. In some countries, university presses are involved in publishing in these areas while in others private specialized publishers dominate.

The publication of general books – fiction, current events, poetry, political analysis, and the like, the kinds of books sold in most bookstores, in fact – constitutes a small segment of the book market in most countries although it tends to be the most prestigious and visible. These books are important because they contribute one way or another to the cultural life of any society. There are many other segments of the book market. Publishing for children, for example, has a significant market in many countries. Here design and artwork are important, and public libraries constitute a significant source of sales. Children's book publishing offers special characteristics from the economic, design, distribution and printing points of view. Other genres, including art books, 'self help' volumes and religious books,
constitute 'niche markets' which have unique characteristics that require specific publishing expertise. There are many types of publishing, each facing specific conditions and all currently experiencing significant change owing to the factors discussed earlier.

Patterns of ownership of publishers also vary. It has been noted that there is a trend toward consolidation in the industry, and toward the emergence of large multinational firms. There is an increasing involvement of multimedia, conglomerate corporations in publishing. Critics of this trend have pointed out that the personal element in publishing is being lost. There are also many small and specialized publishers in the industrialized countries, some of which, as we have seen earlier, are very successful in serving 'niche' markets. In developing countries, publishers tend to be small, undercapitalized, and less specialized since the book market is small and fewer niches are available. Many publishers were established as family firms, and in developing countries remain family-owned. The financial control of publishing firms determines the nature, direction and ethos of the firm. These patterns are in the process of significant change.

The future of the book
Publishers face a future in which the traditional definition of the book is changing. They will have to adapt to the new realities if they are to survive. Books will remain an important product and a central means of imparting knowledge and entertainment. At the same time, the means of producing, distributing and even editing books are changing. Economics, technology and the increasing interweaving of the world economy are all affecting books and publishing.

Publishers must inevitably be more international in their outlook. More books are being translated, although by and large books are being translated from the major metropolitan languages to languages spoken by smaller populations, and there is relatively little translation in the other direction. The ownership of publishing firms shows similar characteristics. Major firms in the large industrialized nations expand into other parts of the world. In Africa, for example, not only are major European publishers entering the market, but better established firms with more capital from South Africa are expanding into other sub-Saharan African nations. At the same time, there is considerable scope for indigenous publishing because local publishers and entrepreneurs have the advantage of knowing national realities and are able quickly to adapt to changing circumstances. There is, without question, a rapidly changing pattern of ownership and entrepreneurship in publishing worldwide.

The book is often linked to other media products, and this will have an impact on what is published and the nature of books, perhaps even changing the definition of books in the long run. Links between books and films, for example, are common, and books are often related to computer applications or CD-ROM products. Books are increasingly issued in other forms, especially CD-ROMs, adding an entirely new dimension to publishing. Publishers in the United States, Europe and Japan are occasionally bypassing the traditional book in favour of alternative high-tech formats, a trend that is likely to grow.

Many feel that the extension of the concept of the book brings 'knowledge industries' to a new level of technological sophistication, and that this will have a positive impact on access to knowledge products of all kinds. This extension does provide a more sophisticated means of delivering knowledge and entertainment. Encyclopedias issued on CD-ROM, for example, have multimedia capabilities that permit the 'reader' to have a different experience than was possible with the traditional printed version. At the same time, the price of such electronic encyclopedias has dropped (although some of the costs in producing such multimedia products are
higher). These innovations, however, may have negative implications for those without access to the new technologies or without the resources to produce expensive multimedia products.

It is likely that we shall see diversification and differentiation as well as economic concentration in the publishing industry. The impact of the multinational multimedia corporations will continue, and there is likely to be increasing concentration of ownership internationally. Economic realities, the high cost of producing media products and the impact of WTO and other trade agreements all point in the direction of concentration. At the same time, there is scope for smaller, locally owned firms that can occupy niche markets. In this way, indigenous publishing will be able to survive in an increasingly difficult marketplace.

Publishers face an increasingly complex and competitive environment. They are forced to lower their costs. Editing, for example, is often done on a freelance basis, and publishers in some cases are unable to provide the editorial services once considered standard. More and more of the responsibility for book production is devolved to the author. Computer composition makes this possible, as authors are often asked to produce their books ready for printing.

The book will be secure in the changing economy of knowledge production in the early twenty-first century. Along with the traditional book, however, will be a variety of products based on the book but utilizing the new technologies for presentation as well as for production and distribution.

Conclusions

Publishing, because it is absolutely essential to the cultural, scientific and educational life of nations, has an importance beyond its limited economic role. While it may be appropriate to import textiles or even computers, the production of books that directly reflect the culture, history and concerns of a nation or people is something that cannot be left to others. Societies cannot afford to lose the ability to publish books of social and cultural importance. It is a vital part of a culture. In this respect it is different and deserves special consideration.

Book publishing is a small but complex industry. It faces significant challenges from changing patterns of ownership, from changing markets and from the implications of new technologies. It is unlikely, as some have argued, that the book will become obsolete in an era dominated by computers and the Internet. Books are simply too convenient and too affordable. Books permit easy access to information. And in many parts of the world, there is little or no access to the new means of communication. The book as a cultural icon and as a knowledge product is here to stay.

Further reading


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