
ELECTRONIC JOURNALS: INCREMENTAL CHANGE OR RADICAL SHIFT?

Book Review of Tenopir & King on Electronic-Journals

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Abstract

Tenopir and King (2000a,b) aim to root discussions of future developments in electronic journal publishing in fact rather than speculation. A systems framework for assessing scholarly journal publishing is set forth. Detailed accounts are presented of all aspects of the scientific communication system. The analyses represent a landmark in the study of scientific publishing; the book is likely to become an indispensable reference. Its scope is, however, more limited than the title suggests, and the authors' work is vitiated somewhat by the age of some of the studies presented, and by their implicit treatment of scientific information as an undifferentiated whole.

Keywords

copyright, citation impact, digital library, electronic archives, electronic publishing, electronic journals, peer review, publication costs, research funding

1. In this magisterial volume, Tenopir and King (2000a,b) present a comprehensive review of thirty years of studies of various aspects of scholarly journal publishing, with a view to drawing lessons for a future dominated by electronic forms of publication. Claiming that up until the mid-nineties "much of the literature on electronic publishing [has been] based on opinion and speculation with little data to support the many conjectures that were being made" (p. xvii), their aim is to present a proper context and perspective, in terms of publishing history, economics, and quantitative studies of the scientific communication system as a whole, for the

emergence of electronic journals. This they do by presenting the results of the numerous studies, spanning four decades, carried out by King Research, Inc. and by the University of Tennessee's School of Information Studies -- of the characteristics of scholarly scientific journals, the information habits of scientists, and the detailed costs of library and publishing operations. These are synthesised with other research findings in a comprehensive and wide-ranging review. The discussion is governed by a unified framework (p. 106ff.) and scheme of measurement incorporating service or product inputs, outputs, usage, outcomes and domain measures for the various areas of activity.

2. The perspectives of all the participants in the system: researchers (as authors and readers), libraries, and publishers, are discussed, covering trends, incentives, motives, and costs. There are five broad divisions to the work: background, including an overview of scientific scholarly journals, a history of traditional and electronic scientific publishing, and the presentation of a systems framework for assessing scholarly journal publishing; scientists' participation, the roles of scientific researchers as authors and readers, and their information-seeking and reading patterns; library participation, the use and economics of libraries in general and of library-provided scientific articles; publisher participation, including trends in scientific publishing, and the economics of journal publishing; and electronic publishing issues, addressing current trends and economic factors relating to electronic journals. The authors aim to address such questions as: Are scholarly journals worth saving? What do trends in the scholarly journal system show? What are the consequences of spiralling scientific journal prices? What contribution do circulation, cost and price relationships make to the "serials crisis"? What are the financial requirements for journal publishing? Do commercial journal publishers generate excessive profits? Will electronic journals make a difference?

3. Some of this work -- principally the authors' well-known cost model for print journal publishing, the surveys of scientists' journal readership and information behaviour, and the work on the economics of the Internet (possibly of limited relevance to the overall discussion) -- has been presented before (Tenopir & King 1998; King & Tenopir 1998; King 1998) and discussed elsewhere (Abate 1997; Bachrach & Heller 2000; Heller 1999; Kent 1999; Meyer 1996). What appears new and valuable in the present work is the account of the history of print and electronic scholarly journals, the descriptive systems framework set out for scholarly journal publishing, the detailed analyses of periodicals management and interlending costs in libraries, the unique account of the history of electronic publishing, and the balanced but brief discussion on electronic journal pricing which concludes the book.

4. The scope of the book is less inclusive than the title suggests. It is limited to scientific, technical and medical journals; social sciences and humanities are excluded. The statistical and economic surveys are exclusively US-based, which may to some extent limit the book's relevance for a UK readership, although some reference is made to European market conditions and to the work of British scholars. The time span of the studies included is large, raising the possibility that some of them may be dated. Scientific publishing is treated as an essentially undifferentiated entity; there is little discussion of trends within individual subject areas or of the possible significance of differences between the information cultures of particular fields. The survey material presented relates solely to print journals; while important

features of print journal use that relate to electronic journal developments are highlighted (chapters 7 and 8), no reference is made to studies of scientists' use specifically of electronic journals. There is little discussion of the non-economic issues for libraries presented by electronic journals.

5. The work is, however, a mine of statistical and financial information for anyone professionally involved with scientific journals, both print and electronic, including academics, publishers, subscription agents, and librarians. The prose style and presentation are generally clear and accessible; detailed economic and financial arguments are presented intelligibly and persuasively to the non-specialist. Its detailed analyses of complex issues represent a landmark in the study of scientific publishing, and the book is likely to establish itself rapidly as a standard reference for students on publishing, information science and librarianship courses for some years to come. However, anyone looking in the chapter on "transformation to electronic journals" for anything resembling serious futurology is likely to be disappointed. New models in publishing are described clearly, and the authors offer some judicious opinions about the future balance of electronic versus printed journals in the marketplace, but the authors are reticent about the market viability of possible "value-added" features of electronic journals (such as searchability of archives, multimedia, interactivity capabilities, and current awareness services) and non-committal about future market developments. Their perspective is analytic, not visionary; their prognosis for the future of scientific publishing is clearly one of incremental change, not of radical shifts in the pattern of scholarly communication.

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