Developments in journal publishing in Latin America – a cautionary tale?

Ian M. Johnson

Professor and Associate Dean, Aberdeen Business School, The Robert Gordon University, Garthdee Road, Aberdeen AB10 7QE, Great Britain (i.m.johnson@rgu.ac.uk)

Meeting:	**158 Acquisition and Collection Development with Serials and Other Continuing Resources**
Simultaneous Interpretation:	No

Abstract

This paper draws on the author's experience from several recent and current research projects to highlight issues that need to be addressed if academic libraries become involved in institutional e-publishing and repositories. After briefly reporting the current state of electronic publishing in Latin America, it comments on the extent to which the emerging media address the problems that have affected conventional journal production in Latin America (irregular publication, inadequate quality control and indexing, and poor marketing and distribution), and the challenges that these presented for scholarly communication and participation (limited visibility and impact). Finally the paper speculates about the developments that are still required to achieve global information interchange, and librarians' role in implementing them.

Introduction

This paper is based on work that has been undertaken as part of a project, REVISTAS, which was supported by the European Commission's ALFA programme. It first provides an outline of the current state of electronic journal publishing in Latin America. It then compares these with the effects of traditional scholarly publishing practices in Latin America, and offers some comments on the implications for libraries.

ALFA

In 1994, the European Commission agreed to sponsor a programme called ALFA (América Latina Formación Académica) to facilitate the exchange of experience and collaboration between European and Latin American Universities.[1] A significant issue in the library profession in Latin America at that time was the problem of developing the information professionals needed in a rapidly changing environment. In a small project funded by the ALFA programme in 1997, I undertook some exploratory discussions with colleagues in Schools of Librarianship and Information Studies in Latin America to try to identify the problems that they faced. Those studies, and surveys and a workshop sponsored by IFLA and largely funded by UNESCO in 1998, confirmed a that a number of issues that affected the profession in the region stemmed from the limited availability of the region's own professional publications (Sabor, 1992) as well as limited access to journals produced abroad (Sabor, 1977). Both these studies also highlighted the perception of a lack of quality regional journals - with which to stimulate research and professional practice within the region (Johnson, Fuertes Medina, and Herrera, 2001).

Project REVISTAS

One of the proposals that emerged from those discussions – and other later discussions with colleagues – was a proposal that was subsequently rejected by the Commission to establish a distance learning Masters Degree programme. A second proposal was intended to complement and support the distance-learning programme by investigating the feasibility of digitising all the Spanish and Portuguese journals in the field of library and information science, particularly those published in Latin America. This project was finally approved late in 2003 (Johnson, 2005), and the work was carried out mainly during 2004 and 2005. Following the practice of many European Commission funded projects that have acronyms that try to indicate something of the substance of the project, a Spanish name was chosen for the project, REVISTAS - **RE**d **VI**rtual **S**obre **T**odas las **A**mérica**S**, which can be literally translated into English as 'JOURNALS - a virtual network across the Americas'.

ALFA is a programme that requires a partnership between universities in Europe and Latin America, and in this project, the Robert Gordon University's partners were Queen Margaret University College, Edinburgh; Universidad Nacional del Sur, Bahía Blanca, Argentina; Universidade Federal do Paraná, Curitiba, Brasil; Universidad Nacional Autónoma de México; Universidad Carlos III, Madrid, Spain; and Högskolan i Borås, Borås, Sweden.

REVISTAS – main aims

As part of the feasibility study, it was necessary to examine the availability of printed journals, and to what extent the text of current journals is available electronically. It also seemed relevant to review the attitudes and practices of Latin American library and information professionals – academics and

practitioners – towards writing for and editing scholarly journals, and what use was made of journals in teaching. Library and information studies clearly have significant role in underpinning the emerging 'Information Society', and merited study in their own right, but understanding our own discipline may provide a paradigm that is applicable in others. This paper aims to share the understanding derived from this work, and invites a consideration of its broader relevance.

LIS journals in Spanish and Portuguese

The work of searching databases to identify journals continues, as further online library serials catalogues come to notice. Up to the end of May 2006, investigations by the partners in the REVISTAS project have identified more than 270 serial publications in librarianship and information science that have been or currently are being published in Latin America, and more than 50 more published in Spanish or Portuguese outside the region. These include a number of publications that appear only annually, and numerous newsletters, as well as scholarly journals and professional magazines.[2]

Some efforts are also being made by universities (and by professional bodies) to begin to publish their existing journals electronically, and to develop Institutional Repositories for papers in the field. More than 70 LIS journals have web sites, and at least 35 are published in full-text, whilst 5 others are publishing their Tables of Contents or Abstracts. Perhaps the most significant repository for LIS in Latin America is '*DoIS: Documents in Information Science*'[3], a database of articles and conference proceedings published in electronic format, many of them in Spanish.

An analysis by Rodriguez Gallardo (1987) suggested that librarianship differed little from other disciplines in that national library associations accounted for 50% or more of known professional periodicals in Latin America. Investigations undertaken as part of Project REVISTAS suggest that fewer than 5% of the region's LIS serials have been produced by commercial publishers.

It was clear that the professional publications appear with various and varying frequencies, that many had ceased to be published, and that collections in libraries were often incomplete – sometimes even in the library of the institution that had been the publisher.

Electronic publishing in Latin America

As in other parts of the world, several models of electronic publishing are now emerging in the Luso-Iberian communities.

Commercial database publishers' interest in the region is growing, and so is the coverage that they provide. Grupo Océano, a Spanish company, has developed

---

[2] A list of journals compiled during the REVISTAS project may be seen at: http://bc.uns.edu.ar/alfa or at http://www.rgu.ac.uk/abs [Accessed 3 May 2006]
[3] DoIS [online]: http://dois.mimas.ac.uk/team.html [Accessed 24 April 2005]

6 databases covering different fields of knowledge.[4] International commercial journal hosts are also producing electronic journal full-text services, and actively promoting their Spanish language content in Latin America. EBSCO Publishing has developed *Fuente Académica, MedicLatina*, and *Economía y Negocios* as part of its EBSCOHost service[5], whilst Thomson Learning promotes *Informe*, which currently includes about 150 Spanish language journals (but only one or two in LIS) as part of its INFOTRAC service.[6] Typically the Spanish language contents are limited compared with the English language material made available by the same host; for example, in Dialnet - as yet – it amounts to no more than about 6% of the total content that that company makes available.[7]

The most recent entrant to the field is ProQuest, which has developed a new collection of full-text scholarly journals *Publicaciones y Revistas Sociales y Humanísticas (Prisma)*[8] in cooperation with the *Hispanic American Periodicals Index*. HAPI is a subscription service for researchers initiated in the early 1970s by the Latin American Center of the University of California, Los Angeles., and offered in a Web searchable version since 1997.[9] It has been, in effect, out-sourcing its full-text provision since 2002 by providing links to journals in JSTOR[10] Ingenta[11], and publishers' web sites. Full-text access has, however, depended in many cases on the user subscribing to the full-text service provider. Moreover, to date, none of the few bibliographic or information science journals indexed by HAPI are available in full-text through these links (Valk, 2004).

The publishing freedom facilitated by the Internet has also challenged the commercial basis of much international scholarly publishing. It has fostered a utopian perspective of the future of scholarly electronic publishing in which journals are edited, produced, marketed and distributed by scholars working for scholarship without the intermediary services of the commercial publisher, not unlike the majority of journals in Latin America. One of the most vocal proponents of 'Open Access' publishing (i.e. free of charge to the user) has explained that:

> "The open access initiatives are not aimed at competing with or replacing publishers. They constitute a parallel movement concerned with access and not with publishing... The primary goal is to assist researchers maximise access to and the impact of their own research, not to resolve the budgetary problems of libraries... (Harnad, 2003)

The 'Open Access' philosophy is reflected in the origin of the best known of the many interesting initiatives in Latin America that are encouraging and supporting journals to shift to electronic publishing and making them available online on

---

[4] Grupo Océano [online]: http://www.oceano.com/oceano/oceano.html [Accessed 5 December 2005]

[5] EBSCOHost [online]: http://www.epnet.com/ [Accessed 15 December 2005]

[6] Informe [online]: http://www.gale.com/pdf/facts/inform.pdf [Accessed 5 December 2005]

[7] Dialnet [online]: http://www.dialnet.com.mx [Accessed 12 April 2005]

[8] Prisma [online]: http://www.il.proquest.com/division/pr/05/20050408.shtml [Accessed 5 December 2005]

[9] HAPI [online]: was viewed on the Web in November 2003 at URL – http://hapi/ucla.edu

[10] JSTOR [online]: http://www.jstor.org/ [Accessed 3 January 2006]

[11] Ingenta [online]: http://www.ingenta.com/ [Accessed 3 January 2006]

open access. *SciELO* (*Scientific Electronic Library Online*)[12] was originally established to meet the need for quality health information in Brazil in 1997, well before the Open Access movement began to attract substantial attention from librarians in the wealthier industrialised countries because of the so-called 'journals crisis.' The SciELO model, a common methodology for the preparation and dissemination of research literature in electronic format (Packer, 2001), is being promoted in other countries throughout Latin America by the Pan-American Health Organisation and almost 250 journals from Latin America and Spain are now included.

Other organisations are acting solely as aggregators, hosting links to open access journals. *RedALyC, Red de Revistas Científicas de América Latina, el Caribe, España y Portugal*[13], has been maintained since by the Universidad Autónoma del Estado de México (allegedly with some support from Spain), and provides access to almost 300 freely available electronic journals in many disciplines in Spanish, Portuguese and English, including 8 titles in the field of information science. CLACSO (Consejo Latinoamericano de Ciencias Sociales) also maintains a digital library that provides open access to more than 50 social science journals published by its member organisations in the region.[14] Outwith the region, but clearly important to it, is *REI, Recursos Electrónicos de Información*[15], a service maintained by the Universidad de la Rioja in Spain, which aggregates open access journals and newsletters in many languages, but without the requirement for peer-review. It includes about 40 titles in the LIS field. Another aggregator in Spain, El Consorci de Biblioteques Universitàries de Catalunya (CBUC) maintains *RACO, Revistes Catalanes amb Accés Obert*[16], which offers some 70 open access journals published in Catalan, including 3 titles in the field of information science

Universities in Latin America are increasingly active in seeking to improve the visibility of their research, and some have seen this new medium as one way to achieve their goal. A growing interest is thus being shown by universities and research agencies in Latin America in establishing Institutional Repositories. Into these they are placing the research papers of their academic staff, students' theses, etc.

Abstracting and indexing services

There are thus a variety of organisational models facilitating access to electronic publications. Making the journals or papers available online is of little value unless there are good indexing and abstracting services to guide the potential users to papers that are relevant to their interests. Only a small proportion of scholarly periodicals from developing countries is indexed and abstracted by the major scientific secondary databases (Whitney, 1992; Cano, 1992-93; Goncalves

[12] SciELO [online] - http://www.scielo.org/ [Accessed 7 August 2004]
[13] RedALyC [online]: http://www.redalyc.com/mx [Accessed 3 June 2006]
[14] CLACSO Biblioteca Virtual [online]:
http://www.clacso.org/wwwclacso/espanol/html/biblioteca/fbiblioteca.html [Accessed 30 April 2006]
[15] REI, *Recursos Electronicos de Informacion* [online]:
http://aps.unirioja.es/biblio/recursos?sub=1 [Accessed 3 June 2006]
[16] RACO (Revistes Catalanes amb Accés Obert) [online]: http://www.cbuc.es/ [Accessed 3 June 2006]

da Silva and Silva Fernandez, 1997). Wayt Gibbs (1995) notes that the inclusion of periodicals from developing countries into major indexing databases such as ISI's Science Citation Index actually declined from 80 in 1981 to 50 in 1993.

Weekly news magazines and newspapers are indexed in well established subscription-based online sources such as *Info-Latinoamérica*[17], *South American Business Information*, *Latin American Newsletters*[18], and *Prensa Latina*.[19] These were established primarily to serve the interests of the international business community, governments, and news media in the economies and politics the southern half of the Americas.

To support the research of the academic community, initiatives such as HAPI have also been developed. Another is LAPTOC, an open access database prepared collaboratively by the Association of Research Libraries' Latin Americanist Research Resources Project that has provided bibliographic citations to the tables of contents of over 800 scholarly journals from Argentina, Brazil and Mexico.[20]

OCLC, the international cooperative cataloguing service, has long since expanded beyond its original regional role in the U.S.A. Recent changes in its organisational structure and business model have seen greater –coverage of Latin American publications in the central OCLC database ('WorldCat').[21] The original SciELO database in Brazil has recently been uploaded into WorldCat; SciELO Chile will be uploaded shortly, and other SciELO partners are expected to follow. This provides an alternative access point for potential users of the journals included in SciELO (some of which will also be accessible through *Prisma*), and will arguably raise their visibility and use, at least amongst OCLC's member libraries (and the Schools of LIS in the region who may access it freely). OCLC has also recently added to its database the indexes (*Clase* and *Periódica*) that have been compiled by the Dirección General de Bibliotecas at the Universidad Nacional Autónoma de México (UNAM-DGB) for the last 28 years, covering 400 of the region's journals in the arts, humanities, social and pure sciences.

Elsevier's new indexing service, SCOPUS[22], includes a similar number of journals from Latin America, quite possibly acquired from the same source as OCLC.

To date, the ISI Citation Indexes, until recently the only available global measures of research impact, have only included journals that are published in English. However, possibly under gentle pressure from its considerable customer base in Spain (as well, perhaps, as incipient competition from new indexing services such as Google Scholar[23] and SCOPUS), Thomson ISI has recently

[17] Info-Latinoamerica - http://www.nisc.com/factsheets/qila.asp [Accessed November 2003]

[18] Latin American Newsletters [online] - http://www.latinnews.com [Accessed November 2003]

[19] Prensa Latina [online] - http://www.prensa-latina.cu/English/ [Accessed November 2003]

[20] LAPTOC [online] – http://lanic.utexas.edu/larrp/laptoc.html [Accessed 7 May 2006]

[21] OCLC WorldCat [online]: http://www.oclc.org/worldcat/default.htm [Accessed 3 January 2006]

[22] SCOPUS [online] – http://www.scopus.com/scopus/home.url [Accessed 7 May 2006]

[23] Google Scholar [online] – http://scholar.google.com/ [Accessed 7 May 2006]

agreed to begin including journals in Spanish in its Citation Indexes from January 2006.

Abstracting and indexing LIS journals

The adoption of an international, collaborative model has underpinned the only current index to journal articles on LIS from or about Latin America that has survived: INFOBILA[24], which has indexed some 60,000 papers. INFOBILA was initiated in 1986 by the Universidad Nacional Autónoma de México, Centro Universitario de Investigaciones Bibliotecológicas (UNAM-CUIB). It is based on formally agreed collaboration with a network of partners who provide abstracts of journals published in their countries. The partnership at present covers 14 of the 21 countries the region, which should enable it to cover about 90% of the region's professional output. Recently, INFOBILA has developed the capacity to include or link to the full-texts of journals.

Retro-Digitisation?

In many respects, the outcome of the project team's investigations may appear positive. However, it is necessary to consider the extent to which current and emerging journal services will address the problems of human resource development that provided the original rationale for the project.

Clearly, there are limits to the feasibility of digitising the older journals. Commercial journal publishing within the region has been inhibited by poor distribution systems, a consequence not only by the relatively weak economies in the region, ~~but also~~ by the poor infrastructure of the book trade (Johnson, 1976; Babini and Smart, 2006). The majority of journals are published with institutional support, and may face low expectations of sales revenue (Babini and Smart, 2006), or even lack any need to recover their costs, and thus have little financial incentive to increase sales by improving distribution mechanisms. These institutional journals are frequently not sold through subscription mechanisms but exchanged in a barter system for journals from other universities or associations. They may eventually enter the collections of some libraries, but not as part of a managed collection development programme and thus libraries' holdings are incomplete (Cano Reyes, 2003).

Whilst the indexes, *Clase* and *Periódica* cover 400 of the region's journals, few of these journals are available in digital form. Moreover, this represents only a fraction of the 15,000 titles represented in Latindex[25], the main directory of journals in the region, which is also compiled by UNAM-DGB, and which may itself be an incomplete list.

Commercial publishers seeking to digitise the region's journals have experienced difficulty in finding complete sets to digitise. Currently, the aim of SciELO is to try to ensure that its collaborating publishers make all the issues of included journals available online from 1997, when SciELO was established. When that target has been reached, efforts will be made to digitise retrospectively the

---

[24] INFOBILA is available, free of charge, directly though the UNAM-CUIB web site [online]: - http://cuib.laborales.unam.mx [Accessed 7 August, 2004]

[25] Latindex [online]: http://www.latindex.unam.mx/ [Accessed 3 June, 2006]

previous decade's issues (1987-96). There are thus only a few journals pre-dating 1997 currently available electronically, mainly as a result of the efforts of their editors to do the necessary processing. There seems likely to be a need for the continued compilation of union lists of titles and holdings to underpin the work of future researchers, and the more widespread introduction of electronic document delivery systems such as Ariel[26] or ILLiad[27] to make scattered material available to them.

Future sustainability?

It proved particularly difficult to identify all those journals that are currently being published, because of the irregular publication patterns of the many journals dependent on institutional support. The editor/publishers of these journals dependent on an annual budgetary allocation by national research councils or through universities to enable them to sustain regular publication. These have often been affected by financial crises in the region which left editors with limited resources (Babini and Smart, 2006) and they have not always succeeded in maintaining a regular publication schedule. It was clear that many journals had been established but failed to survive. It cannot be assumed that transferring from print to online production will provide any guarantee of regular or continuing publication.

The future of the aggregators also cannot be assured. *RedALyC* is maintained by the Universidad Autónoma del Estado de México, but currently apparently needs some support from the Spanish government. The principal funding agency for SciELO, the State of Sao Paolo, has also begun to question whether it should almost alone bear the burden of the central functions of what has become an international service. This insecure financial base must raise concerns about long-term preservation of those electronic journals that do appear, an issue that seems to require the immediate attention of most national libraries.

Quality control?

Researchers' aim in publishing in journals is to enhance the visibility and impact of their work, and they naturally seek the maximum exposure in journals that offer the highest quality and relevant audience for their work. The editor/publishers of journals supported by national research councils or through universities have little financial incentive to raise their visibility, or to raise standards. In a recent, independent study, Urbizagástegui Alvarado (2004) suggested that there were only about 50 current LIS journals published in the region that met a limited definition of an 'academic' journal and have been published regularly, implying that few were likely to be highly regarded and well known. Moreover, he pointed out that only one of the LIS journals that are published electronically has met SciELO's criteria for inclusion, which require evidence of regular publication and quality control through peer reviewing. It is not clear what criteria ISI will apply in selecting Spanish and Portuguese journals for inclusion in the Citation Indexes, but so far only one LIS journal has been included, and this is not the same one that is in SciELO.

---

[26] Ariel [online]: http://www.infotrieve.com/ariel/ [Accessed 17 May 2004]
[27] ILLiad [online]: http://www.oclc.org/illiad [Accessed 3 June 2006]

Accessibility?

A number of efforts were made in various countries to establish indexing services in the LIS field during the 1980s, but these have made little regional impact and have generally been discontinued (Brito, 1987; Rodriguez and Feria, 1990; Bustamante, 1990; Zielinski, 1995).

Details for many titles are no longer being added to LAPTOC. There is no indication why LAPTOC is not being fully maintained, and one must surmise that it is because either no participating library is subscribing to the titles in question, or they can no longer sustain the effort, or simply because the journal has ceased publication

Even in INFOBILA there appear to be deficiencies in the coverage of the region's LIS journals. Given its remit to index papers about Latin America, it has indexed papers taken from nearly 200 journals and newsletters, but only 128 were published in Spanish or Portuguese. Not all of the latter are primarily LIS journals, and some do not originate within the region. Based on the research for the REVISTAS project, it appears that INFOBILA has been covering fewer than half the serials published in the region. At present it indexes few of the electronic LIS journals, but proposals are to be presented to the collaborating partners to include them from some future date.

Coverage of librarianship and information science topics is incidental in many Latin American journals, because publication often takes place in the literature of the discipline whose information management problems are being considered. This is done because the journals may offer greater visibility and impact, but the results of research may thus be scattered and difficult to access.

The aggregators and indexes are themselves not well known. RedALyC was not known to the REVISTAS partners from the region, nor to senior LIS professionals based in the same city. An impromptu survey of the c.350 participants of a conference on digital libraries in Argentina in October 2005 suggested that only about 10 people there were familiar with INFOBILA. UNAM-CUIB is now undertaking a survey to establish exactly who does use it.

Attention must also focus on ensuring that the search engines find and harvest the contents of the electronic journals that are being created. Anecdotal evidence suggests that insufficient attention is being given to the creation of metadata adequate and to registering the journals with search engines to ensure that their contents are found.

Towards a solution?

In 2005, the first meeting of a new ALFA project '*Biblioteca de Babel*' identified a number of practices that it believed should be better developed in the region's universities, and established working groups to develop guidelines for each of them. One working group is focused on Institutional Repositories, and further developments in this field can be expected when those guidelines are published

in 2007.[28] Another is examining librarians' role in the development of information literacy, and may indirectly have an impact on pedagogical practices in every discipline, as well as Librarianship and Information Sciences.

AUTHOR

Ian Johnson is Associate Dean of the Aberdeen Business School at the Robert Gordon University. As former Head of the University's School of Librarianship and Information Studies, he led the development of a wide range of courses and research in publishing studies as well as library and information sciences. As Chairman of the Professional Board of IFLA, he initiated the ongoing dialogue between IFLA and the International Publishers Association. He has been involved with the production of various professional journals as an author, editor, publisher, and a member of the Editorial Advisory Boards. He recently led a project funded by the European Commission examining the feasibility of digitising the library and information science journals in Latin America, and is currently involved in other projects concerned with improving access to networked resources in Russia and developing institutional repositories in Latin American University libraries.

REFERENCES
BABINI, D., *&* SMART, P. (2006). Using digital libraries to provide online access to social science journals in Latin America. *Learned Publishing*, 19 (2), 107-113

BRITO, C. (1987). Pan-American Health Organization CD-ROM Pilot Project. *Information Development*, 3 (4), 208-213

BUSTAMANTE, J. (1990). Information: a neglected industry in Latin America. Paper presented at the *45th FID Congress*, La Habana, Cuba, September 13-22.

CANO, V. (1992). Bibliographic control and international visibility of Latin American periodical publications. *in*: *Indicators for developing countries, edited by* R. Arvanitis and J. Gaillard. Paris: ORSTOM. pp. 511-526.

CANO-REYES, V. (2003). Las revistas académicas en el aprendizaje del estudiante de biblioteconomía [Scholarly journals in the development of studies in librarianship]. *in*: *XXXIV Jornadas Mexicanas de Biblioteconomia. Puerto Vallarta, Jalisco, Mexico*. [online]: http://www.ambac.org.mx/publicaciones/memorias/34 jornadas.pdf [Accessed 15 January, 2006]

GONCALVES DA SILVA, L., *and* SILVA FERNANDES, R. (1997). La cobertura de las revistas Latinoamericanas por los Servicios de Indización: el caso de las revistas brasileñas [Coverage of Latin American journals by the indexing services, with referente to Brazilian journals]. Paper presented at the *Second International Workshop on Scientific Publishing in Latin America*, Guadalajara, Mexico, November 27-30. [Unpublished?]

HARNAD, S. (2003). The research impact cycle. *Information Service and Use*, 23 (2/3), 139-142

---

[28] Grupo de Repositorios de Producción Científica y Visibilidad de la Producción Propia (Biblioteca Babel) [online]: http://www.ugr.es/~k8907300/repositorio1.htm [Accessed 3 January 2006]

HIRALDO, R. A. (2003). Foreword. *in*: *Models of cooperation in U.S., Latin American and Caribbean libraries: the first IFLA/SEFLIN international summit on library cooperation in the Americas*; *edited by* B. E. Massis. Munich: K. G. Saur, pp.10-11

JOHNSON, I.M. (2005). "In the middle of difficulty lies opportunity" - using a case study to identify Critical Success Factors contributing to the initiation of international collaborative projects. *Education for Information*, 23 (1/2), March, 9-42

JOHNSON, I.M., FUERTES MEDINA, A., *and* HERRERA, L.A. (2001). Management education in Latin America and the Caribbean. *Education for Information*, 19 (1), March, 3-18

JOHNSON, P.T. (1976). A brief overview of the book trade in Spanish speaking Latin America *in Seminar on the Acquisition of Latin American Library Materials (19, 1974, Austin, Texas). Final report and working papers.* Amherst, Mass.: SALALM Secretariat pp. 55-59

PACKER, A.L. (2001). The SciELO model for electronic publishing and measuring of usage and impact of Latin American and Caribbean scientific journals. *in*: *Proceedings of the second ICSU/UNESCO international conference on electronic publishing in science, Paris, 2001.* [online]: http://associnst.ox.ac.uk/~icsuinfo/packerfin.htm [Accessed 20 November 2003]

RODRIGUEZ, V., *and* FERIA, L. (1990). The Colima Project: a national endeavor for the systematization of bibliographic and documentary information. Paper presented at the *45th FID Congress*, La Habana, Cuba, September 13-22.

RODRIGUEZ GALLARDO, A. (1987). Las publicaciones periódicas de bibliotecología en los países en desarrollo. [Librarianship periodicals in developing countries.] *Investigacion Bibliotecologica: archivinomia, bibliotecologia e informacion*, 1 (2), January-June, 3-14

SABOR, J.E. (1977) Irebi, Índices de revistas de bibliotecología. *Unesco Bulletin For Libraries*, 31(1), January-February, 40-41, 60.

SABOR, J.E. (1992). The issue of librarianship in Argentina. *Third World Libraries*, 3 (1), Fall, 40-46

URBIZAGÁSTEGUI ALVARADO, R. (2004). Latin American journals in library and information science [Las revistas de bibliotecología y ciencias de la información en América Latina]. *in*: *World Library and Information Congress*: 70th IFLA General Conference and Council, 22-27 August, Buenos Aires, Argentina. [online]: http://www.ifla.org/IV/ifla70/prog04.htm [Accessed 29 August, 2004]

VALK, B.G. (2004). Trickle-down technology: full text access to foreign language journals in the Hispanic American Periodicals Index. *Libri*, 54 (1), March, 9-17

WAYT GIBBS, W. (1995). Lost Science in the Third World. *Scientific American,* 273 (2) August, 92-99.

WHITNEY, G. (1992). Access to Third World science in international scientific and technical bibliographic databases. *in*: *Indicators for developing countries; edited by* R. Arvanitis and J. Gaillard. Paris: ORSTOM. pp. 391-411.

ZIELINSKI, C. (1995). New equities of information in the electronic age. *British Medical Journal,* 310, June, 1480-1481