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ABSC

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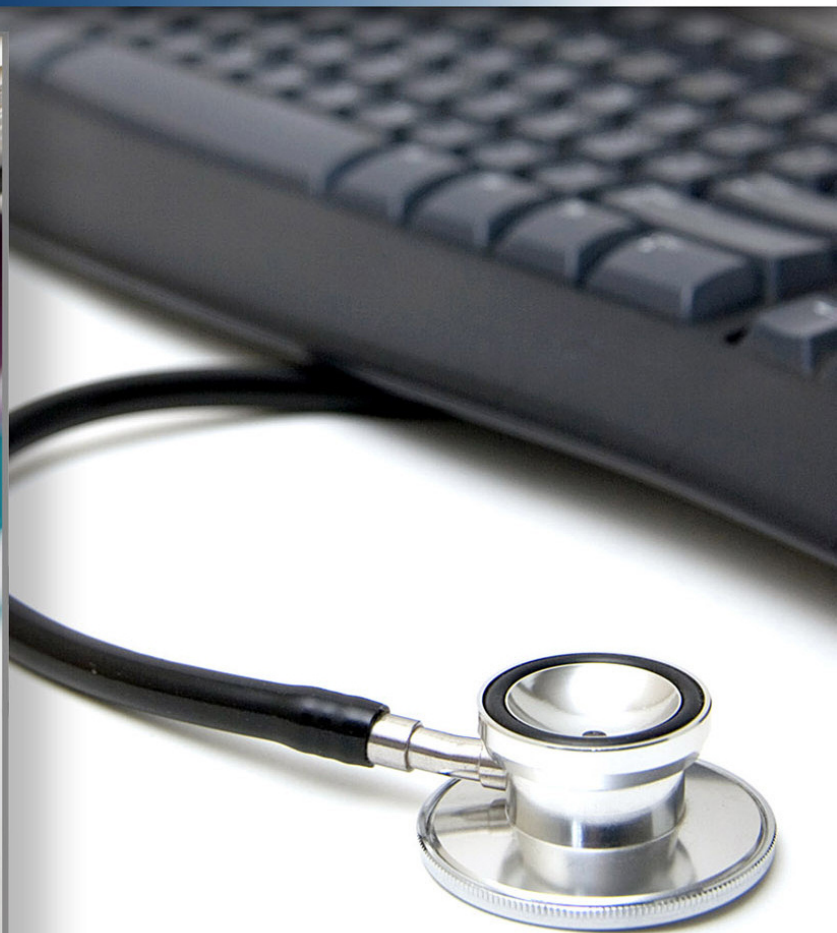
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DEPARTEMENTS / DÉPARTEMENTS

Editor's message

Spring seems a fitting time for the contents of this issue, for JCHLA presents its first peer-reviewed article. As readers may recall, the previous editors, Gillian Griffith and Sandra Halliday, surveyed CHLA members last April for their views on changing JCHLA to a peer-reviewed journal. The survey was completed by 126 respondents. Results indicated that a majority of respondents (60.8%) have published in a professional journal in some format, be it an article, book review, or other type of contribution. A little more than half the respondents (56.7%) also expressed interest in participating as peer reviewers if the journal adopted a peer-review model. Perhaps most encouragingly, the vast majority of respondents (86.8%) said they would support the journal's move to this model.

On the other hand, though the survey results clearly suggest interest in a peer-reviewed forum, the practical realities of obtaining sufficient content and the collective time and effort involved in enforcing a new standard of rigour pose significant challenges. For instance, only a quarter of survey respondents said they had contributed to JCHLA since 2004. Furthermore, only a slight majority (55.3%) noted that JCHLA's shift to peer review would make it more likely for them to submit content. The data implies that the issue of peer review is likely to be an ongoing one and that a goal of one peer-reviewed feature per issue is a promising starting point.

In this issue, JCHLA presents a modest but notable burgeoning, its first peer-reviewed article, by Erin Watson, titled "The role of subject knowledge in academic health sciences libraries: an online survey of librarians working in the United States". In it the author presents a follow-up to her earlier, parallel study of Canadian librarians published in the *Journal of the Medical Library Association*. Her findings suggest that despite the array of settings in which we work and the responsibilities we have, not to mention the high speed of change in this profession, the commonalities amongst health librarians run deep.

For a view of where we're headed as opposed to where we are now, read Allan Cho and Dean Giustini's article on Web 3.0, the Semantic Web. There's also a timely book review of a title on the same topic, *Knitting the Semantic Web*. For further ideas and current awareness, there's Susan Murray's "Consumer health information" column, a book review of *Library 2.0: A Guide to Participatory Library Service*, and the "News and notes" and "Current research" columns.

Of course, don't forget the CHLA annual conference, the most important forum for exchanging news and ideas. This year's meeting, "Navigating the Seas of Change", will be held on 26–30 May in Halifax, Nova Scotia.

Message de la rédactrice en chef

Le numéro du printemps du JASBC tombe à point nommé puisqu'il présente un tout premier article examiné par des pairs. Dans cet ordre d'idée, les rédactrices en chef précédentes, Gillian Griffith et Sandra Halliday, ont procédé à un sondage en avril dernier pour connaître l'opinion des membres de l'ABSC quant à la possibilité que le JASBC devienne une revue soumise à l'examen par les pairs, sondage auquel 126 personnes ont répondu. Selon les résultats obtenus, la majorité (60,8 %) des répondants a déjà publié dans une revue professionnelle sous une forme quelconque, que ce soit un article, une critique de livre ou toute autre contribution. Un peu plus de la moitié des répondants (56,7 %) a aussi exprimé de l'intérêt pour un rôle de pair examinateur, si la revue optait pour ce modèle. Un des points les plus encourageants est qu'une majorité importante des répondants (86,8 %) appuierait l'adoption de ce modèle pour la revue.

En revanche, bien que les données tendent indubitablement à montrer l'intérêt marqué pour un forum soumis à l'examen par les pairs, la froide réalité liée à l'obtention d'un contenu suffisant et au temps dévolu par l'ensemble des personnes qui participent à la mise en œuvre de nouvelles normes de rigueur impose des défis importants. Par exemple, seulement le quart des répondants au sondage disait avoir contribué au JASBC depuis 2004. De plus, une mince majorité des répondants (55,3 %) a indiqué que la transition du JABSC vers la formule d'examen par les pairs augmenterait la probabilité qu'ils soumettent du contenu. Les données recueillies semblent montrer que l'examen par les pairs demeurera sans doute une préoccupation et que l'objectif de publier un seul article examiné par des pairs par numéro pourrait constituer un choix judicieux.

Pour le moment, le JABSC présente comme début modeste, mais prometteur, un premier article examiné par des pairs, signé Erin Watson, intitulé « The role of subject knowledge in academic health sciences libraries: an online survey of librarians working in the United States ». L'auteure y présente un suivi à son étude précédente menée parallèlement dans des bibliothèques canadiennes et publiée dans le *Journal of the Medical Library Association*. Ses conclusions tendent à montrer qu'en dépit de l'éventail de situations diverses dans lesquelles nous travaillons et des responsabilités qui nous incombent, sans oublier les changements rapides propres à la profession, les points en commun sont profondément ancrés chez les bibliothécaires du domaine de la santé.

Pour avoir une idée de ce vers quoi nous allons par rapport à ce que nous vivons aujourd'hui, lisez l'article d'Allan Cho et Dean Giustini sur le Web 3.0, le Web sémantique. Vous trouverez aussi une critique opportune du livre intitulé *Knitting the Semantic Web*, portant sur le même sujet. Pour

As I begin my year as JCHLA Editor, I would like to thank past Editor Gillian Griffith, whose good advice and good humour have made our work in 2007 so enjoyable. Sophie Regalado, the Assistant Editor of JCHLA, and I look forward to working with you in 2008 to make this journal a forum for *your* voices and *your* ideas. See you in Halifax!

Teresa Lee

prendre connaissance d'autres idées et vous mettre à jour sur les nouveautés, jetez un coup d'œil sur la chronique « Consumer health information », de Susan Murray, une critique du livre *Library 2.0: A Guide to Participatory Library Service*, la rubrique « Nouvelles et notes », et la chronique « Current research ».

Bien sûr, n'oubliez pas le congrès annuel de l'ABSC, le plus important des forums pour l'échange d'idées et de nouvelles. Le thème de cette année est *Naviguer sur les mers du changement.* Le congrès se tiendra à Halifax, en Nouvelle-Écosse, du 26 au 30 mai prochain.

Alors que j'entame mon année à titre de rédactrice en chef du JABSC, je tiens à remercier celle qui m'a précédée, Gillian Griffith, qui, par ses conseils judicieux et son humeur réconfortante, a su rendre notre travail en 2007 des plus agréables. Mon adjointe Sophie Regalado et moi anticipons le plaisir de collaborer avec vous afin de faire de cette revue un forum où pourront s'exprimer *votre* opinion et *vos* idées au cours de l'année 2008. Au plaisir de vous rencontrer à Halifax !

Teresa Lee

FEATURE / MANCHETTE

The role of subject knowledge in academic health sciences libraries: an online survey of librarians working in the United States[1,2]

Erin M. Watson

Abstract: Introduction – Previous research suggests that Canadian academic health sciences librarians value knowledge of the health sciences and spend a considerable amount of time gaining and maintaining it. The current study replicates the earlier Canadian survey but employs a larger American sample to address three questions: Do academic health sciences librarians working in the United States find knowledge of the health sciences to be important, and if so, how do they acquire it? Do the attitudes of Canadian and American academic health sciences librarians differ with respect to subject knowledge? Methods – An invitation to participate in a Web-based survey was sent to 711 academic health sciences librarians working in the US; 154 participated. Results – Academic health sciences librarians in the US felt that keeping up with the scientific and medical literature was important to doing their jobs, although only 50% of respondents felt that a degree in the health sciences was somewhat or very useful. Discussion – Participating in professional organizations, visiting Web sites, and reading or browsing journals or magazines were rated by respondents as the best ways to become informed about the health sciences. Findings were similar to those of an earlier survey of Canadian academic health sciences librarians.

Introduction

Some librarians claim that little or no subject knowledge is required to work in science librarianship or indeed in any field of librarianship, arguing that is in large part librarians' knowledge of librarianship that determines their competence, rather than their knowledge of the disciplines they serve [1]. Others have claimed that the sciences are best served by those holding science degrees [2]. Still others feel that one may become a competent science librarian by educating oneself about the sciences [3]. While the need for subject knowledge in sciences and health sciences librarianship has been debated for some time, it has received renewed attention in the discussion of required competencies for health sciences liaison librarians.

Liaison librarians are librarians assigned to provide services (e.g., literature searching, reference assistance, instruction, collection development) to particular academic departments. A recent survey of clients of health sciences liaison librarians found that 89% felt it was "very important" or "somewhat important" that liaison librarians have a background in the discipline they serve [4].

Few studies, though, have been done to determine what importance academic health sciences librarians themselves place on subject knowledge. A 1990 study indicated that some academic health sciences librarians felt a need for subject knowledge, since several respondents stated that upon assuming their positions they had difficulty "getting accustomed to the nomenclature of medicine and grasping medical terminology" and some felt that this was "attributable to a lack of subject knowledge as their background knowledge was in totally different area [sic] such as humanities or social science" [5]. In 2004, a survey was conducted to determine whether academic health sciences librarians working in Canada felt subject knowledge was important, and if so, how they acquired and maintained it. While this survey seemed to indicate that Canadian academic health sciences librarians recognized the need for subject knowledge and devoted a considerable amount of time to maintaining and acquiring it, the sample size was small [6]. Were these findings representative of the attitudes and behaviours of academic health sciences librarians working across the United States as well? In the interests of comparison and confirmation, it was considered appropriate to conduct a similar survey of librarians working in the US.

Methodology

In February 2006, an online survey of librarians working at 103 of the 122 libraries that serve US medical schools (identified by consulting the Web site of the Association of American Medical Schools) was undertaken. The survey instrument (Appendix A) was a brief questionnaire consisting

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of 22 questions with write-in sections. Before being distributed, it was reviewed and approved by the University of Saskatchewan Behavioural Research Ethics Board. Prospective participants were identified by consulting the Web sites of their libraries. Some of the 19 libraries excluded from this study did not provide a staff listing or did not specify the role of their staff (i.e., librarian or paraprofessional). Two libraries were closed at the time of the survey mail-out, so their librarians were also excluded from the study. Once prospective participants had been identified, an e-mail was sent inviting them to complete an online survey, which was essentially the same as that sent to Canadian academic health sciences librarians in 2004, although references to French-language programs and organizations were removed, and the wording of a few questions was clarified. The survey was administered only in English and was completed on the Web, allowing respondents to remain anonymous. To comply with the University of Saskatchewan's ethics regulations, the author did not require respondents to answer all questions to submit the survey.

Results

Characteristics of respondents

Of 719 e-mail messages sent, eight were sent to invalid addresses. One hundred fifty-four of a possible 711 surveys were submitted, a response rate of 21.7%.

Of the 151 respondents who answered the question "How long have you worked in health sciences or science libraries?", 89 (58.9%) had worked more than 10 years in health sciences or science librarianship (Table 1). In this respect, the sample approximates the composition of the academic health sciences librarian workforce in North America, because the 2003–2004 edition of the *Annual Statistics of Medical School Libraries in the United States and Canada* indicated that 66.7% of medical school librarians in the two countries had worked for more than 10 years in the field [7].

Educational background

Of the respondents, 20 (13.0%) held a degree in the health sciences, defined here as the health professions (nursing, medicine, dentistry, pharmacy, etc.). When asked whether holding a degree in the health sciences was important to carrying out their job, 77 (50%) respondents felt it was very or somewhat important. There was no correlation between the number of years respondents had spent in the field and the importance they placed on holding a degree in the health sciences. Eleven (7.1%) respondents felt the subject degree was "very important". With one exception, these respondents held a degree in a health science or natural science (Table 2).

Several librarians working in the systems area commented that the bulk of their work was in the area of information technology, so subject knowledge was not important or much less important than for other librarians. This view is reflected in their responses to the question regarding the importance of a health sciences degree (Table 3).

Respondents indicated that many other areas of study were equally or more important than the health sciences. The areas of study mentioned by the largest number of respondents (Fig. 1) were the following: computer science and technology ($n = 37$); education ($n = 25$); management or administration

Table 1. Respondents' years of experience in science or health sciences libraries.

Years of experience	No. of responses
<2	10 (6.6)
2–5	34 (22.5)
6–10	18 (11.9)
11–15	25 (16.6)
>15	64 (42.4)

Note: Values in parentheses are the percentage of responses ($n = 151$).

($n = 21$); biology, chemistry or other basic sciences ($n = 20$); library and information science ($n = 19$); communication and writing ($n = 17$); statistics and research methods ($n = 14$); liberal arts and humanities (including history) ($n = 6$); accounting, marketing and other areas of business ($n = 6$); and the social sciences (including psychology) ($n = 6$). One respondent indicated that he or she perceived a trend towards hiring subject specialists without library and information science education and that he or she disagreed with this.

Currency

Keeping up with the scientific and medical literature was rated by 80% ($n = 120$) of respondents to be "somewhat important" (50.7%; $n = 76$) or "very important" (29.3%; $n = 44$). Only 2% ($n = 3$) of respondents felt that it was not at all important, while 18% ($n = 27$) felt it was not very important (Fig. 2). Librarians who had spent less time in the field were more likely to find currency important. The Spearman's rank correlation coefficient was 0.179 (which was significant at the 0.05 level), where a score of +1 would indicate that all those who spent less time in the field found currency more important, a score of –1 would indicate that all those with more experience in the field found currency more important, and a score of 0 would indicate no correlation between the two variables.

Hours per week devoted to continuing education

Respondents reported spending an average of 4.4 h per week on continuing education, defined here as participating in professional associations' activities, visiting Web sites, browsing journals or magazines, reading electronic discussion lists, taking university or community college courses, or watching or listening to television or radio programs. However, the amount of time spent varied widely; the standard deviation was an extremely large 4.5, and reported values ranged from 0–30 h per week. There was no correlation between the number of hours spent per week and the number of years spent working in the health sciences. Those with cataloguing responsibilities spent the least amount of time on continuing education, but because the standard deviation was so large for each group, the differences between the respondents holding different responsibilities were not significant (Table 4).

Ways to become informed

Visiting Web sites, reading or browsing journals or magazines, and participating in professional organizations were rated by the largest numbers of respondents as the best ways to "gain or maintain knowledge of the health sciences".

Table 2. Number of responses to the question "How important do you feel it is that your position be filled by someone who has a degree in a health sciences field (nursing, medicine, dentistry, pharmacy, physiotherapy, etc.)?" by respondent's degree.

Degree held	Very important	Somewhat important	Not very important	Not at all important
All respondents ($n = 154$)	11	66	53	24
Health sciences ($n = 20$)	7	9	2	2
Biological sciences ($n = 28$)	3	13	10	2
Other sciences ($n = 9$)	0	7	2	0
Language and literature ($n = 43$)	1	14	18	10
History ($n = 23$)	0	13	8	2
Other humanities ($n = 11$)	0	8	2	1
Psychology ($n = 10$)	0	4	5	1
Other social sciences ($n = 20$)	0	6	10	4
Kinesiology ($n = 2$)	0	2	0	0
Business ($n = 4$)	1	1	1	1
Education ($n = 18$)	0	8	7	3
Fine arts ($n = 7$)	0	5	2	0
Other ($n = 9$)	0	2	3	4

Note: Many respondents had degrees in more than one area; therefore, their response was noted for each degree.

Table 3. Number of responses to the question "How important do you feel it is that your position be filled by someone who has a degree in a health sciences field (nursing, medicine, dentistry, pharmacy, physiotherapy, etc.)?" by primary responsibility of the respondent.

Area of responsibility	Very important	Somewhat important	Not very important	Not at all important
Administration	4	22	12	8
Cataloguing	0	4	4	0
Collection development	4	17	16	4
Interlibrary loan	1	6	4	1
Reference	7	44	30	13
Systems/information technology	0	8	9	6
User education	4	38	27	11
Other	2	14	11	7

Note: Many respondents had more than one primary responsibility, thus their responses are listed for each responsibility.

These methods were rated as "very useful" or "somewhat useful" by the largest number of respondents—96% ($n = 138$), 91% ($n = 130$), and 90% ($n = 127$), respectively. Figure 3 shows the number of respondents rating each method as "very useful". There was no correlation between the number of years of service and the ranking of any of the methods, nor did preferred method vary according to primary responsibility of the respondent.

Professional organizations

Forty percent of respondents ($n = 56$) indicated that professional associations were a "very useful" method to gain or maintain knowledge of the health sciences. Most respondents (89.2%; $n = 132$) were members of the Medical Library Association. Other national associations mentioned by respondents were the American Library Association (and various sections thereof, including the Association of College and Research Libraries, Reference and User Services Association, etc.) (6.1%; $n = 9$), the Association of Aca-

demic Health Sciences Libraries (4.7%; $n = 7$), and the American Medical Informatics Association (4.1%; $n = 6$). Three respondents (2.0%) indicated they were members of the Special Library Association's pharmaceutical and health technology division. Many respondents were members of local health library associations, especially chapters of the Medical Library Association.

Web sites

Thirty-nine percent ($n = 56$) of respondents indicated that they found Web sites very useful in gaining or maintaining knowledge of the health sciences. Respondents were asked to list the sites they visited on a weekly or more frequent basis; 96 did so. By far the most-mentioned Web site was MedlinePlus, listed by 11.7% ($n = 18$) of respondents. News sites such as *The New York Times* science or health sections and CNN were mentioned by several respondents, as were the Centers for Disease Control site, PubMed/Medline, and Google. Respondents were asked to provide names of sites

Fig. 1. Number of respondents rating various areas of study as of equal or greater importance to the health sciences.
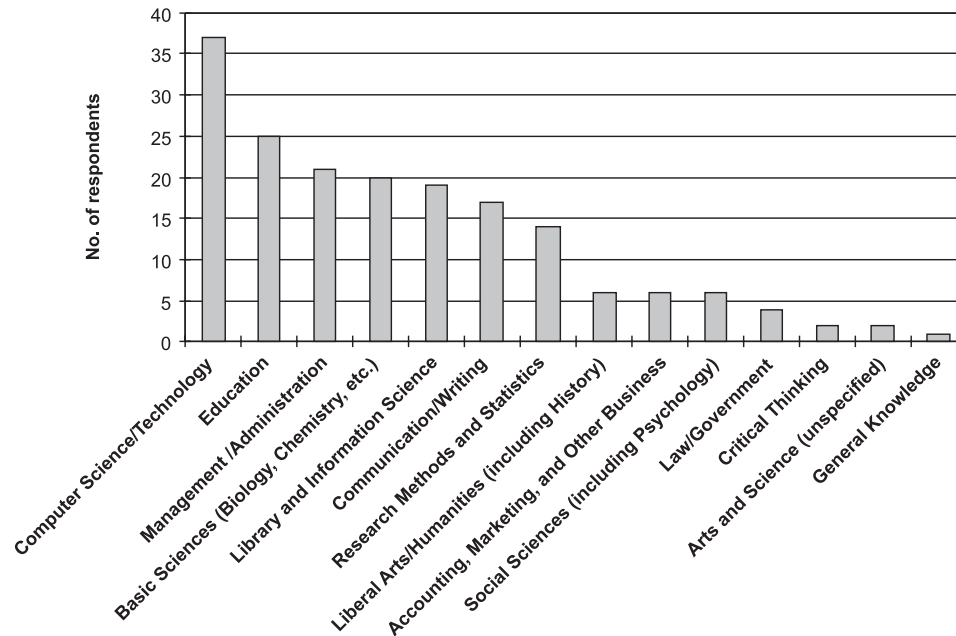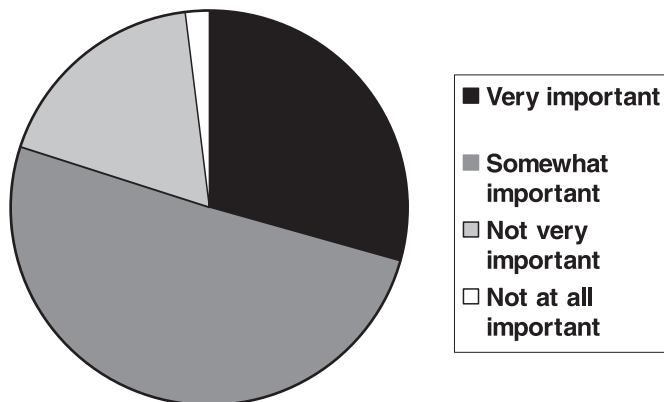

Fig. 2. Perceived importance of keeping up with the scientific and medical literature.

that they visited for their "own education, i.e., not to answer a reference question". This question was perhaps not completely understood by respondents, since a few stated that they found answering reference questions to be educational. The intention behind the question, however, was to discover which sites respondents used for their own personal learning about the health sciences, not which sites they found most useful for answering reference questions, even if respondents found the process of answering reference questions to be educational.

Journals and magazines

Browsing or reading journals or magazines was rated by 39% ($n = 56$) of respondents as a "very useful" way to gain or maintain knowledge of the health sciences. The journals read or browsed once or more per month by the greatest numbers of respondents were the *Journal of the American Medical Association* (48%; $n = 71$) and the *New England*

Journal of Medicine (45.3%; $n = 67$) (Fig. 4). *Science* (26.4%; $n = 39$), *BMJ* (25.7%; $n = 38$), and *Nature* (21.6%; $n = 32$), were read by far fewer respondents.

Magazines that popularize science were read by some respondents but not by nearly as many as were the scientific journals. *Science News* was read by 11.5% ($n = 17$), *New Scientist* by 8.8% ($n = 13$), *Discover* by 8.1% ($n = 11$), and *Popular Science* by 4.4% ($n = 6$).

Respondents were given the opportunity to write in titles that they read on a regular basis (i.e., once every month for weekly publications and once every 3 months for monthlies). *Academic Medicine* was the most-read write-in title; it was listed by 6.5% ($n = 10$) of respondents. *Scientific American* was written in by 3.9% ($n = 6$) of respondents.

Several respondents indicated that they used RSS feeds, table of contents alerting, or keyword alerting services to find out about new journal articles and that they no longer necessarily browsed or read the complete journal in either physical or online form. Some continued to find browsing helpful; however, one respondent indicated that he or she regularly browsed all of the titles (numbering over 300) received by his or her library.

Discussion lists

Twenty-eight percent ($n = 39$) of respondents found electronic discussion lists to be very useful. MEDLIB-L was the most popular; 45.9% ($n = 68$) of respondents indicated that they subscribed. Respondents were asked to list other lists to which they subscribed. MEDREF-L, a health sciences reference list, was listed by 4.5% ($n = 7$) of respondents. Various Medical Library Association chapter and section lists were also listed by respondents.

Independent study

Twenty-eight percent ($n = 37$) of respondents found "independent study", that is, studying without being enrolled in a course, to be "very useful".

Table 4. Continuing education hours by area of primary responsibility.

	No. of respondents	Minimum	Maximum	Mean	Standard deviation
Administration	43	0	20	4.7907	4.45912
Cataloguing	7	1	10	2.8571	3.18479
Collection development	38	1	30	5.1776	6.04234
Interlibrary loan	10	0.5	12	3.3000	3.34332
Reference	91	0	30	4.2582	4.39024
Systems	20	0	15	2.9625	3.62400
User education	77	0	30	4.7143	4.88447
Other	30	0.25	20	4.8750	5.26404

Fig. 3. Percentage of respondents rating various methods of continuing education as "very useful".
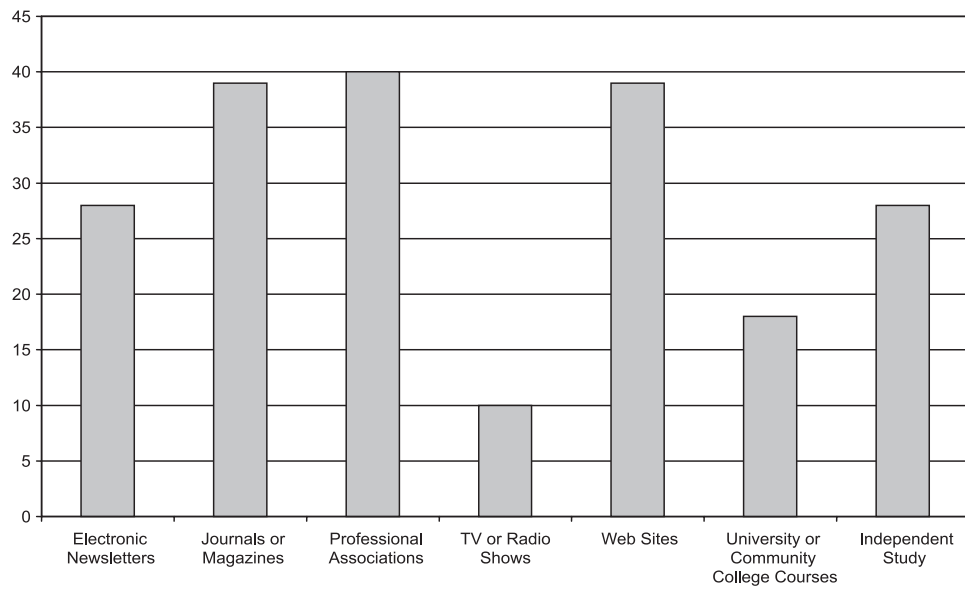

Fig. 4. Magazines and journals read by more than 5 respondents. Weekly journals or magazines were read at least once a month; monthly journals or magazines were read at least every 3 months. CMAJ, *Canadian Medical Association Journal*; JAMA, *Journal of the American Medical Association*; JADA, *Journal of the American Dental Association*; NEJM, *New England Journal of Medicine*.
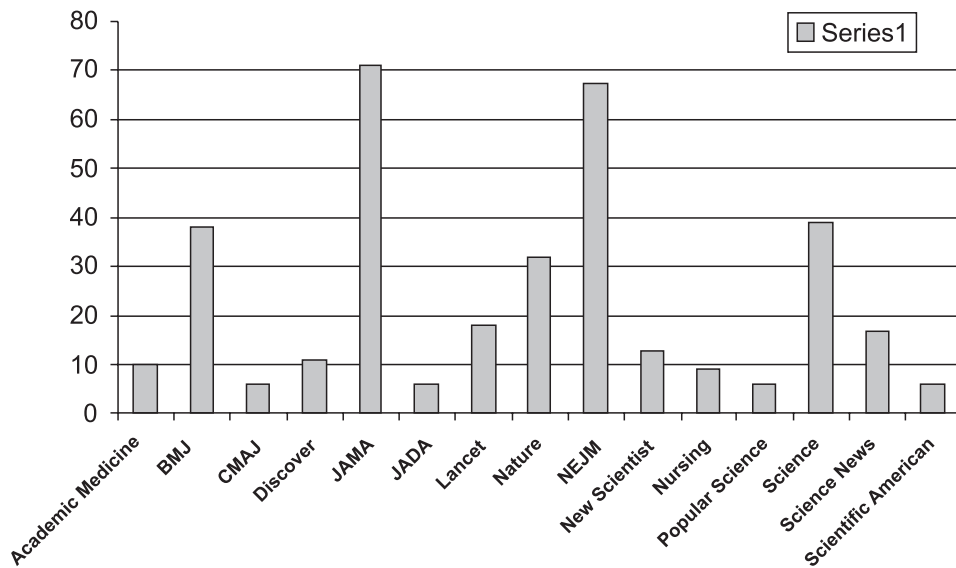
University or community college courses

Few respondents (3.2%; $n = 5$) were taking a course at the time of the survey. Epidemiology and public health, medical informatics, and health communications were the areas of study. A few respondents also indicated that they had taken courses in medical terminology and the basic sciences in the past. Eighteen percent ($n = 21$) of respondents felt that taking courses was "very useful". Interestingly, this was the method that was rated by far by the greatest number of respondents (26%; $n = 31$) as "not at all useful".

Television and radio programs

Ten percent of respondents ($n = 14$) felt watching television or listening to radio programs on science topics was "very useful". *Nova*, which appears on the Public Broadcasting Service (PBS), was the most popular show; 36.7% ($n = 53$) of respondents watched this show at least once a month. National Public Radio shows were mentioned by many respondents (17.5%; $n = 27$); among these, *Science Friday* was the most popular. PBS shows other than *Nova* were also listed by a large number of respondents as were shows on the Discovery channel.

Other activities

Some respondents listed other methods that they used to gain or maintain knowledge of the health sciences. The method most often listed by these respondents was attending lectures, workshops, rounds, or conferences. Some of the respondents indicated that these events were aimed at health practitioners rather than librarians. Other methods listed were answering reference questions, reading blogs and (or) RSS feeds, talking to patrons, following the news, participating in journal clubs, taking online courses, and watching webcasts.

Membership in the Academy of Health Information Professionals

Because the Medical Library Association's professional development program, the Academy of Health Information Professionals (AHIP), requires continuing education of its members, the author was interested in finding out what percentage of respondents took part in AHIP. Only 37.5% ($n = 57$) of respondents indicated that they were AHIP members. This is similar to the figure (34.8%) cited by Baker et al. in their survey of Midwest librarians [8].

Discussion

Subject knowledge is important to academic health librarians in the US. However, only 50% ($n = 77$) of respondents felt a subject degree was "very" or "somewhat" important to doing their job. There are several possible explanations for this finding. Some respondents indicated that they felt that their training in librarianship gave them the skills they needed to work in any area. Others acknowledged the usefulness of subject knowledge and knowledge of the terminology but felt that this could be acquired through methods other than formal degree studies. Still others felt subject knowledge was useful but not necessary. Also, as mentioned previously, some respondents held positions in areas such as systems, in which knowledge of the health sciences was of little importance. Finally, because very few of the respondents, and according to a past survey, few health sciences librarians overall, hold a degree in the health sciences, yet they are able to carry out their jobs, it may be felt to be of little importance [5].

Currency, while recognized by the majority of respondents as important, was seen as less important by those with more experience in the field. A much larger percentage of the more experienced participants listed administration as one of their primary responsibilities, while fewer of them had other responsibilities such as reference or user education. Several administrators commented that knowledge of the health sciences was no longer very important to them, because their duties were largely managerial, so this may explain the difference in importance attributed to keeping current with the literature.

Interpreting the results of this survey was difficult because ethics regulations made it necessary to give respondents the option to not respond to as many of the questions as they wished. This meant that nearly every question was answered by a different number of respondents. Thus, it was difficult to compare the responses to different questions, for example, to determine the relative ranking of the continuing education methods.

A comparison with the Canadian study

The greatest difference between the responses from the American sample and that of the 2004 survey of Canadian librarians [6] was that a larger and statistically significant different percentage of American respondents (50.0%) than Canadian respondents (30.0%) rated a degree in the health sciences as very or somewhat important. It is hard to say why this was the case. Certainly, the larger number of health sciences degree holders among the American respondents (11.7% compared with 6.7% of Canadian respondents) could explain part of this difference.

Otherwise, the responses of the two groups were strikingly similar. First, the distribution of responses indicating the importance of keeping up with the literature (93.3% in Canada felt it was somewhat or very important compared with 80.0% in the US) was not significantly different. Second, the amount of time devoted to continuing education, although on average higher in the Canadian sample (6.0 h compared with 4.4 h in this study), was not statistically significantly different because of the large amount of variance within the two groups. Third, the relative ranking of the methods for keeping up-to-date was the same in both samples, with the largest numbers of respondents indicating that professional associations were "very useful". In the two surveys, the professional association to which the largest number of respondents belonged was their respective national health library association (Canadian Health Libraries Association or Medical Library Association). Visiting Web sites, browsing or reading journals, reading electronic discussion lists and studying independently, taking university and community college courses, and finally watching or listening to television or radio shows were (in descending order) the next most popular continuing education activities.

When asked to identify disciplines that were equally or more important than the health sciences, the two groups of respondents both listed computer science and technology,

administration, statistics and research methods, basic sciences, education, and the liberal arts, although the US respondents were unique in mentioning library and information science.

One large difference was in the percentage of respondents who belonged to AHIP: 37.5% in the US versus 3.3% in Canada. However, since AHIP is a program of the Medical Library Association, an organization based in the US, and since the majority of Canadian respondents belonged to the Canadian Health Libraries Association rather than the Medical Library Association, it is not surprising that a larger percentage of American respondents are AHIP members.

The overwhelming similarity of responses between the Canadian and US samples lends credibility to these data as a reflection of the beliefs of northern North American (i.e., excluding Mexican) academic health sciences librarians.

Conclusions

Academic health sciences librarians in both the US and Canada feel that continuing education in the disciplines they serve is important; however, few hold a degree in these areas, and only some see such degrees as useful.

Professional associations play an important part in allowing academic librarians to keep up with the health sciences.

While respondents generally felt that keeping up-to-date with the literature was important, the amount of time spent on this varied widely.

Acknowledgements

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Appendix A

1.   Apart from library and information science, in which subject(s) (e.g., history, psychology) is/are your degree(s)?

2.   How important do you feel it is that your position be filled by someone who has a degree in a health sciences field (nursing, medicine, dentistry, pharmacy, physiotherapy, etc.)?

     a.   very important
     b.   somewhat important
     c.   not very important
     d.   not at all important

3.   Are there areas of study other than the health sciences that you consider more important to your position? Equally important? Please explain.

4.   To which of the following electronic newsletters do you subscribe? (Please check all that apply.)

     a.   CANMEDLIB
     b.   MedLib-L
     c.   STS-L
     d.   None

5.   Are there other electronic newsletters on the topic of health librarianship to which you subscribe? Please list them here.

6.   Which of the following weekly science or health science journals or magazines do you read or browse at least once a month? (Please check all that apply.)

     a.   BMJ
     b.   Canadian Medical Association Journal
     c.   JAMA
     d.   Lancet
     e.   Medical Post
     f.   Nature
     g.   New England Journal of Medicine
     h.   New Scientist
     i.   Science
     j.   None

7.   Are there science or health science journals or magazines other than those listed above that you read or browse at least once a month? Please list them here.

8.   Which of the following monthly science or health sciences journals or magazines do you read or browse at least once every three months? (Please check all that apply.)

     a.   Canadian Nurse
     b.   Discover
     c.   Journal of the American Dental Association
     d.   Journal of the Canadian Dental Association
     e.   Nursing 2006
     f.   Popular Science
     g.   Quintessence International
     h.   None

9.   Are there monthly science or health science journals or magazines other than those listed above that you read or browse at least once every three months? Please list them here.

10. To which health science or science librarianship professional organizations do you belong? (Please check all that apply.)

     a.   ACRL – Science and Technology Section
     b.   Canadian Health Libraries Association
     c.   Medical Libraries Association
     d.   Special Library Association – Biomedical and Life Sciences Division
     e.   Special Library Association – Science-Technology Division
     e.   None

11. Do you belong to any other health sciences library or science library professional associations? Please list them here.

12. Are you a member of the Academy of Health Information Professionals (AHIP)?

    a. Yes
    b. No

13. Which of the following radio or television programs do you listen to or watch once a month or more? Please check all that apply.

    a. Nature of Things
    b. Nova
    c. Quirks and Quarks
    d. Scientific American Frontiers
    e. Other

14. Do you watch or listen to other health sciences or science-related radio or television shows at least once a month? Please list them here.

15. Do you visit any science or health science-related web sites on a weekly or more frequent basis for your own education (i.e., not to answer reference questions, etc.) If yes, which ones? Please provide either the URL or web site name.

16. Please estimate how many hours you spend per week doing the activities mentioned in the previous questions (reading electronic newsletters, reading or browsing journals, watching television or radio programs, visiting websites, and participating in activities organized by professional organizations.)

17. Are you currently taking any university or community college courses in the science or health field? If so, in which area(s) (e.g., nutrition, medical terminology)?

18. To what extent is keeping current with the scientific or medical literature important to doing your job?

    a. Very important
    b. Somewhat important
    c. Not very important
    d. Not at all important

19. How useful do you find the following activities for gaining or maintaining knowledge of the health sciences?

    a. Electronic newsletters
    b. Journals or magazines
    c. Professional organizations
    d. Television or radio shows
    e. Websites
    f. University or community college classes
    g. Independent study (i.e., study of textbooks, etc., without being registered in a course)

20. Are there activities not listed above that you find useful for gaining or maintaining knowledge of the health sciences? Please list them here.

21. What is/are your primary responsibility/responsibilities? (Please check all that apply.)

    a. Administration
    b. Cataloging
    c. Collection Development
    d. Interlibrary Loan
    e. Reference
    f. Systems/Information Technology
    g. User Education
    h. If your primary responsibility/responsibilities was/were not listed above, please list them here.

22. How long have you worked in health sciences or science libraries?

    a. Less than 2 years
    b. 2–5 years
    c. 6–10 years
    d. 11–15 years
    e. More than 15 years

Thank you very much for taking the time to complete this survey.

Web 3.0 and health librarians: an introduction

Allan Cho and Dean Giustini

Key messages

- Web 3.0 refers to the *third* decade of the Web from 2010–2020. Some experts believe we are entering a *pre*-Web 3.0 period.
- The current Web is characterized by global information overload and repetitive searching and browsing using Google.
- Debates about Web 3.0 are still somewhat theoretical, but a common theme is "developing an integrated web of data" based on sound principles of information systems design. Some experts say that the principles of librarianship should play a role in improving how the Web is organized.
- In 2008, semantic technologies are being used to solve information retrieval problems in bioinformatics, which may have specific applications in medicine. The term "Semantic Web" is occasionally used as a synonym for Web 3.0 (and vice versa), though some disagree with that usage.
- Health librarians should be thinking ahead about how to design better domain-specific search tools and user experiences (including virtual) in Web 3.0.

Introduction

This paper introduces some of the main concepts and principles of Web 3.0 for health librarians. In doing so, it aims to explore some of the issues and terminologies associated with the Web's projected development over the next 10 years, and at a level of generality that we hope will raise awareness and encourage debate. Many health librarians have recently adopted the underlying principles and social software tools of Web 2.0 into practice [1]. Can we be moving into the early stages of Web 3.0 already?

To answer that question, let's begin with some of the many conflicting definitions of Web 3.0. According to Wikipedia, "There is considerable debate as to what the term Web 3.0 means, and what a suitable definition might be" [2]. Web futurist Nova Spivack says that Web 3.0 refers to the third decade of the Web's development from 2010–2020 (Table 1). Spivack states that Web 3.0 is "…[a] more connected, open, and intelligent Web, using semantic technologies, distributed databases, natural language processing, machine

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learning and machine reasoning…" [3]. A number of Internet experts say that we are already moving toward using the technologies that herald this new era [4]. But some librarians say that these definitions do little to clarify what Web 3.0 is (E. Barsky and G. Rowell, personal communication, 23 February 2008). One librarian blogger is vehement that Web versions do not (or should not) exist [5].

In 2007, the trade journal *PC Magazine* stated, "In case you missed it, the Web now has version numbers" [6]. We view the use of Web versions as simply a kind of shorthand. As the Web evolves, periods of time designated by numbers serve as useful guideposts in the digital age. Think of how terms like Generation X have entered the zeitgeist and how the Web has spawned terms like the Internet Generation (iGen). It seems natural to us to use these terms as tags or memes because they help to refer to a trend or a set of trends quickly. In fact, some futurists have already begun to list the features of the Web beyond its third generation to Web 4.0 [7]. Despite some misuse, versioning seems likely to continue for the foreseeable future.

What's important, in our view, are the Web 3.0 information trends that health librarians should be anticipating, watching, and thinking about for the future:

(1) The idea of transforming the Web into a large database
(2) Creating "information" pathways for artificial intelligence and machine-based reasoning
(3) Applying varied technologies of the Semantic Web to improve information retrieval
(4) Assimilating three-dimensional (3D), virtual, and simulated worlds into the Web experience [8]

The common theme here is a focus on information organization and retrieval. We are interested in these issues because they are so dominant in our work as health librarians. Although Web 3.0 and the Semantic Web have distinct connotations, we argue that both concepts point to the need for a sea change in the way that Web information is organized, described, and located. This similarity may explain why the two terms are often used interchangeably and (or) synonymously. Where possible, we try to make distinctions between Web 3.0 and the Semantic Web, but we too are grappling with a number of vague definitions.

Everything is miscellaneous and fragmented

To clarify Web 3.0 concepts, information retrieval seems a natural starting point for health librarians. Simply put, Web

Table 1. Stages in the development of the Web.

Web 1.0	Web 2.0	Web 3.0
1990–2000	2000–2010	2010–2020
Read *or* write Web	Social Web	Semantic Web

3.0—an extended, *better* version of the Web created over the next 10 years—is needed because of the problems we have in performing effective information retrieval. As many expert searchers know, cumulating the medical evidence via the Web has become increasingly difficult in an "everything-is-miscellaneous" universe [9]. For systematic reviews, health librarians must invest vast amounts of time and energy in locating relevant studies from multiple databases. There is often considerable hesitancy on the part of health librarians in doing systematic reviews because finding all studies on clinical interventions is so onerous. As health librarians, we would like to explore better methods of federated searching and metasearching in Web 3.0.

Some of the root causes of poor integration in information retrieval seem self-evident to us. As Svenonius writes, "The essential and defining objective of a system for organizing information is to bring *like* information together and to differentiate what is *not* alike" [10]. The current Web does an extremely poor job of bringing information together (co-location) and differentiating between closely related concepts (disambiguation). Another pernicious problem is how fragmented the biomedical literature has become; even meta-search tools such as the Trip Database and SumSearch cannot completely remedy the problems that health librarians face in conducting searches for a disseminated literature. While it is true that designing better systems of organization and using greater precision help, the information age has simply become too efficient in creating vast amounts of new medical knowledge.

Another problem for health librarians is that the Web is growing faster than we can possibly index it, given the proliferation of open access journals, self-archiving practices, and institutional repositories on the Web. That means we must investigate new systems of organization and automate some of our indexing processes. It means exploring the newest information technologies with an eye to their successful implementation outside our borders to knowledge-based organizations globally. The temptation is to rely on our venerable databases like MEDLINE or EMBASE for the most reliable information; however, we run the risk of becoming increasingly irrelevant or incompetent in the information age if we don't look beyond them.

With fewer health professionals using our print collections (many of whom want to locate information on the Web for themselves) [11], our attention should shift away from our physical libraries to "the Web as library". If we don't, our work may be overtaken by other information professionals, or perhaps our users themselves. To keep in step with changes needed over the long term, we must explore new ways of resolving information problems beyond our profession's limited ideologies [12].

Information themes in Web 3.0

A common library theme in this discourse is that Web 3.0 responds to a public service need and prompts information

professionals to think about better principles of organization. In a 2007 *British Medical Journal* editorial, one health professional is quoted as saying that Web 3.0 should be where "pathways" for retrieval are supported by better descriptive standards [13]. To us, this notion sounds rather like the underlying purpose and architecture of MEDLINE. Further, these pathways are not unlike those we use to build our online catalogues. The importance of what documents *mean* and using words carefully to describe what they mean is an important aspect of indexing and the Semantic Web. Incidentally, "semantics" is a term derived from the Greek to give signs, meaning, or to make significant—a central goal of the Semantic Web.

In his landmark *Scientific American* paper, Sir Tim Berners-Lee said that semantic annotation of Web sites (adding metadata, for example) will create a global "'Web of data'…and help to solve humankind's most complex problems" [14]. In a very real sense, we agree that this is also one of the primary goals of Web 3.0: moving toward integrated data, information, and knowledge. But not all information on the Web needs to be co-located, since so much of it is of questionable value. Why is this?

In recent years, the increase in worldwide production of information due to the participatory aspects of Web 2.0 has resulted in information overload. Spam, remix, and duplication are enormous problems. Is it any surprise that our users settle for something in Google ("a few good papers") when they could be doing more structured searching in MEDLINE? For our part, health librarians teach users how to find synthesized information in point-of-care tools like Cochrane, Clinical Evidence, and DynaMed. But how many physicians use these tools with any regularity? By missing important, seminal papers, physicians end up making decisions with incomplete or misleading evidence, leading to tragic results [15].

Some librarians point to an exclusive reliance on keyword searching as a source of many information problems. The lack of subject-oriented approaches is at the root of many of our end-users' search problems. But do they have many alternatives? As health librarians, we argue that keyword searching on the Web can only be recommended for "known item" searching or browsing (again, "a few good papers"). Google's drive to digitize any and all information and make it accessible is a noble goal. But much of this information is not described, indexed, or found easily. *Will* it be found? Or will that depend on luck and serendipity? Although free content may be very useful and convenient to access, digitization projects and open access journals do add to info-overload.

The logical first step in resolving overload is to isolate authoritative information. To move toward the Semantic Web, we will need to make the Web documents that contain meaningful information understandable to machines [16]. And let's put the *evidence* where end-users are searching. In Web 3.0, we literally need to tell computers what to do with containers of knowledge, the documents. This is achieved through rules-based inferences and telling computers what we want them to do with a certain set of documents. Changing how we organize knowledge will require a shift in our thinking. Some information professionals suggest that

we begin to think of the open Web not as a place for ephemera but as a massive, searchable database [17].

Controlled terms and ontologies

By the way, while some health librarians develop their own sophisticated databases, most of us have not gone beyond creating basic relational databases by using simple tools like Microsoft Access. Typically, as reference librarians, we are asked to participate in creating index vocabularies and then to critique the interfaces used to extract information from the database. Hence, our focus has been on developing and (or) using subject-specific vocabularies to find things [18]. Even though we understand how terms and their variants are used in information retrieval, our experience is somewhat limited in building retrieval systems. This is one of the reasons why Google and search engine developers have usurped much of our work in the information age, not to mention vast fame and fortune.

For the billions of documents created in the future and stored on the Web, who will index this material? Will Google implement post-hoc controlled vocabularies as a means of organizing the world's information? Or will Google's hegemony in searching be challenged by semantic technologies? The National Library of Medicine (NLM) is working on automated indexing, which may be part of what we can use in the future [19]. Clearly, more librarian-led research and development need to be done.

Another challenge we anticipate is how to teach end-users about controlled vocabularies. Will we decentralize indexing by delegating the mountain of work to end-users as they publish their papers? Will health professionals want to learn how to index or create their own metadata? Is it reasonable to teach researchers how to index as part of information literacy? Health professionals have used keywords to annotate their journal articles for some time, so we can build on those efforts. If we are serious about finding better ways of doing things, health librarians will need to be creative.

With respect to grants, we believe that resource description will become an added step in applying for funding from the National Institutes of Health and the Canadian Institutes of Health Research in the future. Providing access to the published results of government-funded studies is now a requirement in both Canada and the United States [20,21]. Without the ability to apply controlled vocabularies and create metadata, researchers will be at a disadvantage as they self-archive their work. Where research is placed on the Web without proper metadata or in a form unreadable to computers, it will remain a fugitive literature—*hidden in the deep Web* [22]. At least one medical librarian suggests that a number of medical ontologies be used to create metadata, such as SNOMED and the Unified Medical Language System (UMLS) [23,24].

Semantics in medicine

The Semantic Web is linked to globalization as English has become the Web's *lingua franca*. A homogenized, universal language makes it easier to implement semantic technologies and controlled vocabularies, and promotes standards that help to clarify concepts. But even where Eng-

lish is widely used, natural language variations creep into the vocabulary. As health librarians, we know that a consistent use of MeSH in MEDLINE will result in more accurate, complete searching. For example, doing MeSH searches for documents *about* the field of thoracic oncology or about the diseases lung cancer and small-cell lung neoplasia are easier when using a controlled vocabulary. Think about doing the same searches in Google and the variations of meaning and ambiguity that are encountered as a result of natural language terms.

Several semantic technologies have already been tested to disambiguate and clarify the confusion of overlapping concepts within millions of documents. These language-enabling technologies include an alphabet soup of acronyms, such as the RDF (Resource Description Framework), OWL (Web Ontology Language), FOAF (Friend of a Friend), and SKO (Simple Knowledge Organization System) [25–28]. The Web 2.0 tool, RSS (Really Simple Syndication), is also a descriptive framework [29] and enables RSS feeds to be read by all readers and aggregators despite potential incompatibilities.

Whether social tagging and folksonomies will result in useful data for use in Web 3.0 is an important question. A great deal of tagging work has already taken place on social bookmarking sites by consumers and patients. If we expect health professionals to learn more about applying labels to their work for the benefit of finding it later, the same expectation should be placed on general Web users. Of course, the problem with social tagging is its arbitrary nature as it is a kind of "indexing of the crowds". Marking your own work creates messy data and offers no controls for synonyms, homonyms, and spelling [16]. This is not a problem for a finite group of documents but becomes increasingly problematic as datasets increase. Moreover, the data created on tagging sites may be unusable unless health librarians can find ways to map it to an acceptable ontological framework.

Some health consumers and patients are using data language and ontologies in innovative ways [30]. Friend of a Friend (FOAF) is a decentralized social networking project (or system) that started in a grassroots way. Consumers have created a semantic vocabulary for describing people's names, ages, locations, jobs, and relationships, using them to reveal common interests. Users post information, photos, and video in all formats and connect them—something MySpace and Facebook cannot do on their own. More than one million individuals have already interlinked their FOAFs, including users of the blogging services Livejournal and TypePad. Health librarians should explore how to apply medical vocabularies to pre-existing datasets such as those on social networking and bookmarking sites, as they could potentially save considerable investments of time and resources.

Web 3.0 as a searchable catalogue

Semantic Web experts, especially those from computer science fields, can learn a great deal from library experts who are pushing the boundaries of automated cataloguing and indexing. In health libraries, technical experts at the NLM and the Canada Institute for Scientific and Technical Information (CISTI) are logical contacts. There are undoubt-

edly many experts across the globe doing interesting work in this area, and we welcome their input.

A major library document currently in development that may have an impact on the direction of Web 3.0 is the soon-to-be-released Anglo-American Cataloguing Rules (AACR3). By 2009, the Resource Description and Access (RDA)—the new name for AACR3—will be a critical text for describing digital materials and establishing information principles well into the 21st century [31]. The issue of whether librarians can adjust their approach to Web 3.0 or be bound by their profession's "persnickety standards" [32] is open for debate. We suggest that health librarians enter into a discussion with their colleagues about RDA and plan for its implementation, not only within their institutions but with librarians in other disciplines and jurisdictions.

The Semantic Web has been described in terms that seem rather close in spirit to library databases. Searching in Web 3.0 has been described as "searching a large database" of millions of records, similar to our online catalogues. For the Semantic Web to work, it will need to describe items and provide multiple access points so that we can find them during our retrieval. In that sense, the Semantic Web will need to bring materials together in the same way that John Shaw Billings' *Index Medicus* brought journal literature together in the 19th century [33].

The catalogue metaphor can be taken further. Extensible markup language (XML) (used to format Web pages) and the efforts of the World Wide Web Consortium (W3C) point to new methods of presenting information [34]. The Online Computer Library Center (OCLC), long known for its contributions to descriptive frameworks, is working on better methods of describing objects and their intellectual content through the Dublin Core Project [35]. Bibliographic records for commonly held books and information sources are typically obtained through the Z39.50 standard; RDF technologies merely build on those organizational principles from our print-based library culture. But there is a sense that the two groups—library professionals and semantic technologists—do not communicate or see their potential synergies.

If libraries expect to participate in Web 3.0, our new cataloguing code, the Resource Description and Access (RDA), could play a prominent role. Libraries have a long history of data-sharing using consensus exchange standards and protocols. However, we discern some challenges ahead with RDA. Current standardization has become a "straightjacket" in response to changes in the digital landscape. Our legacy tools, such as MeSH, LCSH, and LCC, are difficult to apply outside of AACR2 and MARC-based records [36]. Some librarians argue that the next generation of library vocabularies should be "webified" [37]. Unless the new AACR developers can shift focus and find a way to work with professionals outside their field of expertise, there may be no significant change to how librarians will implement the code in Web 3.0.

Members from the Dublin Core Metadata Initiative and the RDA Joint Steering Committee produced a statement recently to ensure that the library community strives to collaborate on a metadata standard, one fully compatible with emerging Web architectures [38]. Developing controlled thesauri compatible with those on the Semantic Web is a positive but preliminary step as we move forward into Web 3.0.

The Semantic Web in bioinformatics

Semantic technologies are already being used on the Web particularly in the area of bioinformatics [39]. Retrieving relevant biomedical information from numerous databases is difficult owing to many different formats and data distribution across systems. The public and private network protocols that bioinformaticians encounter do not always work together and the interfaces used to filter information are often dissimilar. But somehow bioinformatics professionals have found a way to bring all of this data together using Semantic Web technologies. Think of the information derived from biomedical data mining as semantic *mashups*, a merging of tools that were formerly incompatible but now work together [40].

The NLM has designed a way to co-relate genome data with disease information in PubMed. Three bioinformatics tools—Entrez Gene, Online Mendelian Inheritance in Man, and the Gene Ontology—are used to look at genomes and disease information in tandem [41]. The bridging of genotypes and phenotypes in these resources normally requires manual effort or the development of customized software to process information. However, RDF was used to integrate these resources and enables seamless access to them as a unified resource [42].

WikiProteins is an important and exciting bioinformatics project; it incorporates annotation built by a community of scientists into a semantic framework [43]. In targeting scientists, Wikiproteins has potential application in several biomedical disciplines. It plans to import data from the world's leading biological databases such as PubMed and UniProt. Entries for every gene will contain relevant *data* such as its functional domains, areas of expression, and publications that discuss it. The merging of these databases yields more than two million relationships and five billion relationship pairs.

These examples of how semantic technologies can be used to further biomedical knowledge provide a glimpse into what is possible, where disparate sources of information can be brought together and viewed from new perspectives.

Open access and data in Web 3.0

Unless commercial interests overtake it, the Semantic Web should be an open space where previously incompatible systems work together. However, we believe that Web technologies are outpacing the legislation passed to control them. Openness and accessibility are not absolutes and need to be controlled. Confidential data, for example, will need to be protected in Web 3.0. Copyright concerns will obviously be front and centre in this emerging digital space. The restrictions imposed by copyright already inhibit access, and information retrieved in any future Web context may not be fully accessible owing to copyright. A good example of limited or reduced access because of copyright is the snippets feature in Google Books and Amazon.

The Google Health project and Microsoft's HealthVault may test society's tolerance for pushing the boundaries of accessible personal health information. Because accessing health information online can compromise patient confidentiality and privacy, openness on the Web will be a constant source of tension in Web 3.0. Consider that any digital activ-

ity can be recorded and used for commercial purposes or marketing. The promise of Web 3.0 can quickly turn to intrusion: Do we want private medical information to be archived and fully searchable just because the technology makes it possible?

An added tension that tests public–private boundaries is information stored on social networking sites. Recently, Facebook gave permission to Google to crawl the member pages of its site [44]. What are the consequences of technological intrusions into the private realm? Machine-based intrusions into our lives will be a flashpoint in the development of the Semantic Web. Building a single searchable Web database comes with compromises to our privacy as crawling tools go deeper into databanks that hold information about us. Health librarians should work with legislators to find a balance of protections and freedoms in this potentially rich but volatile place.

Conclusions

In the past decade, Web searching has been almost single-handedly dominated by the popularity of Google, the PageRank algorithm, and repetitive retrieval practices [45, 46]. Do we really need to search across the entire Web for each search query? Is that an efficient use of computer power? In order for librarians to find a way to change this, we can take steps to learn about new Web technologies in development and get more involved in the debate about their application in the information age. A first step may be to articulate our concerns about the Web's future through our national associations, professional journals, and personal weblogs.

Web 2.0 has ushered in an exciting time for health librarians. This short period has been a source of knowledge-creation and experimentation on an unprecedented scale but marked by information overload and poor findability. Health librarians need to advocate for (and devise) better methods of access over the next 10–15 years. Leading to reliable medical evidence has become a focus for many librarians as we see our end-users struggle to find the information they need. In Web 3.0, this problem will only worsen as the Internet scales up in size to a trillion or more documents [47].

As health librarians, we need to articulate a vision for change and find a secure place for ourselves in the digital age, or we may be left behind. A new Web built on the principles of librarianship would look vastly different from the Web we experience today. The Semantic Web could potentially be a place where much of the knowledge of librarians (and health service workers) can be built into the Web itself [48]. One of the remarkable things about semantic technologies is that they will probably not affect the look or feel of our "Web experiences", and may even perform their tasks without our end-users' knowledge. In other words, our users will likely be unaware of any filters or tools we have created to organize and connect the vast networks of information across the world. This could be important given our users' growing expectations for seamless delivery in the information age and their demands for instant access to handheld technologies. In any case, how we deliver those services to health care professionals while implementing the newest Web technologies will require constant adaptation as we move into Web 3.0.

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COLUMN / CHRONIQUE

Consumer health information

Compiled by Susan Murray

MedlinePlus

In September 2007, the National Library of Medicine released the "What's New on MedlinePlus" Web page (http://www.nlm.nih.gov/medlineplus/whatsnew.html). It will keep you current on new MedlinePlus topics, podcasts, featured sites, and new issues of the *NIH MedlinePlus Magazine*. The "What's New" items will display for 3 weeks and are also available through an RSS feed. This page and RSS feed complement the already-available MedlinePlus Health News RSS, which delivers press announcements and HealthDay news stories. Access the What's New on MedlinePlus RSS and the MedlinePlus Health News RSS from the E-mail Lists and RSS Feeds page at http://www.nlm.nih.gov/medlineplus/listserv.html.

Consumer and Patient Health Information Section (CAPHIS)

CAPHIS recently launched a redesign of their Web site at www.caphis.mlanet.org. There isn't a significant amount of new content yet, but stay tuned. The 1990–1999 back issues of the CAPHIS newsletter *Consumer Connections* are available now, and issues from 2001–2007 will be available in January 2008.

Health literacy

Health Resources and Services Administration (HRSA)

The US Department of Health and Human Services, Health Resources and Services Administration (HRSA) has developed a free online course titled "Unified Health Communication 101: Addressing Health Literacy, Cultural Competency, and Limited English Proficiency". This interactive training course is designed to improve interaction between health care providers and their patients. It "aims to raise the quality of provider–patient interactions by teaching providers and their staff how to gauge and respond to their patients' health literacy, cultural background, and language skills."

The course's five modules take 4–5 hours to complete. Modules 1 through 4 provide an introduction to health communication, health literacy, cultural competency, and limited English proficiency. In Module 5, participants can apply information learned in previous modules (http://www.hrsa.gov/healthliteracy/training.htm). (Press release available at http://newsroom.hrsa.gov/NewsBriefs/2007/HealthLiteracy.htm.)

Medical Library Association (MLA)

There are currently six "deciphering Medspeak" topics available: breast cancer, stroke, diabetes, eye disease, HIV/AIDS, and heart disease (http://www.mlanet.org/resources/medspeak/index.html).

Multilanguage health sites

S*P*I*R*A*L (Selected Patient Information Resources in Asian Languages) is a joint initiative of the South Cove Community Health Center and Tufts University Hirsh Health Sciences Library. Information is listed by language on about 30 topics.

Notable new publications and Web sites

While not new, MLA has a very useful page of Resources for Health Consumers that they update. See http://www.mlanet.org/resources/consumr_index.html.

Jacobson P. Empowering the physician–patient relationship: the effect of the Internet. *Partnership: the Canadian Journal of Library and Information Practice and Research.* 2007;2(1). Available from http://journal.lib.uoguelph.ca/index.php/perj/article/view/244/374.

Books

Torkos S. *The Canadian encyclopedia of natural medicine.* Mississauga, Ont.: John Wiley & Sons Canada Ltd., 2008. CAN$29.99. ISBN 978-0-470-83908-9.

This is a household reference for natural medicine with information specifically for Canadians. The bulk of the book is devoted to a listing of common health conditions with natural prescription and lifestyle suggestions. It also includes detailed information on dietary supplements; tips on safe supplementing, including potential drug and herbal interactions; tips for a healthy diet; and sleep and stress management tips. The author is a pharmacist, author of 10 books, and certified fitness instructor.

Roter DL, Hall JA. *Doctors talking with patients/patients talking with doctors: improving communication in medical visits.* 2nd ed. Westport, Conn.: Praeger, 2006. US$29.95. ISBN 0-275-99014-1.

Since a doctor commonly interrupts a patient after about 18 seconds, the second edition of this book on better communication is most welcome. The authors describe the pro-

cess of communication, analyze social and psychological factors that color doctor–patient exchanges, and detail changes that can benefit both parties. This edition includes an expanded section on how a patient's age affects visit dynamics and the role of health literacy. New is a discussion of the influence of physician characteristics, such as race and gender, on visit dynamics. Roter is a professor at Johns Hopkins School of Medicine and Nursing, and Hall is a professor of psychology at Northeast University.

Grahek N. *Feeling pain and being in pain.* 2nd ed. Cambridge, Mass.: Bradford Books, MIT Press, 2007. US$30.00. ISBN 13 978-0-262-07283-0.

With the rise of conditions where no physiological cause can be determined for the pain, pain is an area that has been scrutinized. The late author, a professor of philosophy at the University of Belgrade, looks at the radical dissociation syndromes of pain without painfulness and painfulness without pain and explains the crucial distinction between feeling pain and being in pain.

Weller S. *Healing yoga: a practical approach to healing common ailments with yoga.* Toronto: McArthur & Company, 2007. CAN$29.95. ISBN 1-55278-621-8.

This is a basic book with easy-to-follow workouts for beginners that provides a brief background about the philosophy of yoga, practical information to get started, information about yoga's benefits for various health conditions, and a series of wellness routines. The author is a registered nurse who has worked in the field of psychiatry, assisting clients with stress-related conditions.

Groopman J. *How doctors think.* Boston: Houghton Mifflin, 2007. US$26.00. ISBN 13 978-0-618-61003-7.

This book examines what goes on in doctors' minds as they treat patients. The author, a *New Yorker* staff writer, best-selling author, and professor at Harvard Medical School, explores how doctors err and how they can benefit from listening to patients and avoid making snap decisions and incorrect diagnoses. Groopman also reveals how technologies that are supposed to assist in making better diagnoses may hinder the process.

Burke C. *To buy or not to buy organic: what you need to know to choose the healthiest, safest, most earth-friendly food.* New York: Marlowe & Company, 2007. CAN$18.50. ISBN 13 978-1-56924-268-1.

The subtitle sums it up: this practical guide helps consumers sort out the confusing options presented by organic foods. It covers why organics are a good choice, how pesticide exposure impacts health, how to grow organic foods and reap health benefits from them, and where to find healthy food. The author is a food journalist and former professional chef.

COLUMN / CHRONIQUE

Current research

Compiled by Sophie Regalado

Charbonneau DH. Demystifying survey research: practical suggestions for effective question design. *Evidence Based Library and Information Practice.* 2007;2(4):47–56. Available from http://ejournals.library.ualberta.ca/index.php/EBLIP/article/view/516/668.

Objectives: Recent research has yielded several studies helpful for understanding the use of the survey technique in various library environments. Despite this, there has been limited discussion to guide library practitioners preparing survey questions. The aim of this article is to provide practical suggestions for effective questions when designing written surveys. **Methods:** Advice and important considerations to help guide the process of developing survey questions are drawn from a review of the literature and personal experience. **Results:** Basic techniques can be incorporated to improve survey questions, such as choosing appropriate question forms and incorporating the use of scales. Attention should be paid to the flow and ordering of the survey questions. Careful wording choices can also help construct clear, simple questions. **Conclusions:** A well-designed survey questionnaire can be a valuable source of data. By following some basic guidelines when constructing written survey questions, library and information professionals can have useful data collection instruments at their disposal.

Medernach C, Franko J. Assessing the impact of information services in a regionalized health-care organization. *Health Info Libr J.* 2007 Dec;24 Suppl 1:46–56. PMID 18005294.

Objectives: Assessment of the usage of medical library services before and after the implementation of several new services, as well as assessment of the clinical impact of the information provided by the medical library. **Methods:** A sample of employees, residents, and physicians were surveyed using a stratified, random selection process in two surveys 4 years apart. The response rate for the first survey was 52%, and the response rate for the second survey was 35.2%. **Results:** Differences in usage included increased overall use of the librarians and library services, decreased use of the Internet as a source of information, and direct and indirect impacts upon patient care. Information needs of respondents also increased to where 65% of employees and 94% of physicians require information at least once a week. Patient management was the main reason for needing information. The top two specific uses were to find out about a condition and determine a treatment plan. **Conclusions:** These findings parallel some of the findings of other researchers and contradict the findings of others. Possible ex-

planations for these findings and implications for future research are discussed.

Brettle A. Evaluating information skills training in health libraries: a systematic review. *Health Info Libr J.* 2007 Dec;24 Suppl 1:18–37. PMID 18005292.

Introduction: Systematic reviews have shown that there is limited evidence to demonstrate that the information literacy training health librarians provide is effective in improving clinicians' information skills or has an impact on patient care. Studies lack measures that demonstrate validity and reliability in evaluating the impact of training. **Aim:** To determine what measures have been used; the extent to which they are valid and reliable; to provide guidance for health librarians who wish to evaluate the impact of their information skills training. **Methods:** *Data sources* – Systematic review methodology involved searching seven databases and personal files. *Study selection* – Studies were included if they were about information skills training, used an objective measure to assess outcomes, and occurred in a health setting. **Results:** Fifty-four studies were included in the review. Most outcome measures used in the studies were not tested for the key criteria of validity and reliability. Three tested for validity and reliability are described in more detail. **Conclusions:** Selecting an appropriate measure to evaluate the impact of training is a key factor in carrying out any evaluation. This systematic review provides guidance to health librarians by highlighting measures used in various circumstances and those that demonstrate validity and reliability.

Marshall JG. Measuring the value and impact of health library and information services: past reflections, future possibilities. *Health Info Libr J.* 2007 Dec;24 Suppl 1:4–17. PMID 18005291.

Objectives: To summarize the context, history, and results of research studies conducted on the value and impact of health library and information services by the author since 1975 and to use this as a basis for examining ongoing developments related to evaluation research. To provide a comprehensive bibliography of library value and impact studies. **Methods:** Literature review and background based on personal involvement in the studies under discussion. **Results:** The author's studies demonstrate an ongoing evolution of value and impact studies since the mid-1970s. In health sciences libraries, the approach taken to measuring value and impact has been strongly influenced by the type of research being conducted in the health sciences field as a whole. As a result, health sciences library researchers have become early

adopters of methods that incorporate outcome and impact measures and rigorous research designs, and the concept of evidence-based library and information practice. The paper recommends that a range of research approaches from various disciplines be used to guide future evaluation research. **Conclusions:** Value and impact studies will continue to be important resources for evidence-based practice as health information professionals deal with evolving user needs and new ways of delivering information to a variety of audiences

Banks DE, Shi R, Timm DF, Christopher KA, Duggar DC, Comegys M, et al. Decreased hospital length of stay associated with presentation of cases at morning report with librarian support. *J Med Libr Assoc.* 2007 Oct;95(4):381–7. PMID 17971885. Available from http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid= 2000787.

Objective: The research sought to determine whether case discussion at residents' morning report (MR), accompanied by a computerized literature search and librarian support, affects hospital charges, length of stay (LOS), and 30-day readmission rate. **Methods:** This case-control study, conducted from August 2004 to March 2005, compared outcomes for 105 cases presented at MR within 24 h of admission to 19 210 potential matches, including cases presented at MR and cases not presented at MR. With matching criteria of patient age (±5 years), identical primary diagnosis, and secondary diagnoses (within three additional diagnoses) using International Classification of Diseases (ICD-9) codes, 55 cases were matched to 136 controls. Statistical analyses included Student's t tests, χ^2 tests, and nonparametric methods. **Results:** LOS differed significantly between matched MR cases and controls (3 days versus 5 days, $P < 0.024$). Median total hospital charges were $7045 for the MR group and $10 663 for the control group. There was no difference in 30-day readmission rate between the two groups. **Discussion/Conclusion:** Presentation of a case at MR, followed by the timely dissemination of the results of an online literature review, resulted in a shortened LOS and lower hospital charges compared with controls. MR, in association with a computerized literature search guided by the librarians, was an effective means for introducing evidence-based medicine into patient care practices.

Kronenfeld M, Stephenson PL, Nail-Chiwetalu B, Tweed EM, Sauers EL, Valovich McLeod TC, et al. Review for librarians of evidence-based practice in nursing and the allied health professions in the United States. *J Med Libr Assoc.* 2007 Oct;95(4):394–407. PMID 17971885. Available from http://www.pubmedcentral.nih. gov/articlerender.fcgi?tool=pubmed&pubmedid=17971887.

Objective: This paper provides an overview of the state of evidence-based practice (EBP) in nursing and selected allied health professions and a synopsis of current trends in incorporating EBP into clinical education and practice in these fields. This overview is intended to better equip librarians with a general understanding of the fields and relevant information resources. **Included professions:** Professions are athletic training, audiology, health education and promotion, nursing, occupational therapy, physical therapy, physician assisting, respiratory care, and speech-language pathology. **Approach:** Each section provides a description of a profession, highlighting changes that increase the importance of clinicians' access to and use of the profession's knowledge base, and a review of each profession's efforts to support EBP. The paper concludes with a discussion of the librarian's role in providing EBP support to the profession. **Conclusions:** EBP is in varying stages of growth among these fields. The evolution of EBP is evidenced by developments in preservice training, growth of the literature and resources, and increased research funding. Obstacles to EBP include competing job tasks, the need for additional training, and prevalent attitudes and behaviors toward research among practitioners. Librarians' skills in searching, organizing, and evaluating information can contribute to furthering the development of EBP in a given profession.

Mi M, Gilbert CM. Needs assessment: prerequisite for service excellence. *Journal of Hospital Librarianship.* 2007;7(4):31–52.

The Helen L. DeRoy Medical Library at Providence Hospital strives to maintain high library standards and to make library service improvement an ongoing process. To maintain and strengthen the library's key role in knowledge-based information management and to align the library's goals and objectives with the mission of its parent organization, the library conducted a needs assessment to identify any existing needs and gaps in library services and resources. A needs assessment survey with 17 items was designed and administered to library clients via e-mail and the library Web site. Data were collected and analyzed for any needs and gaps in library services and resources. The identified needs and gaps presented the library useful information for future strategic and proactive planning and provided opportunities for the library's continuous improvement in its services and resources provision. The results of the needs assessment also produced strong evidence for the library to justify its selection of solutions for reduction and elimination of existing gaps based on data collected from library clients rather than the library staff's own perception and estimation of clients' needs. The needs assessment very well served as a first step for the ongoing process of library service improvement.

Frumento KS, Keating, J. The role of the hospital librarian on an institutional review board. *Journal of Hospital Librarianship.* 2007;7(4):113–20.

Hospital Institutional Review Boards (IRB) are an integral part of the institution's infrastructure. By federal law, any research that involves human subjects is required to seek IRB approval before the research can proceed. Being a member of the institution's IRB affords the hospital librarian with a unique opportunity to have a pivotal role in the multiple facets of the research process. This article reviews the history behind the need for IRBs, the role they play at hospitals, and how librarians at their institutions can increase their services' visibility and value by being a member on the IRB.

BOOK REVIEW / CRITIQUE DE LIVRE

Knitting the Semantic Web. Edited by Jane Greenberg and Eva Méndez. New York: Haworth Press, 2007. 257 pages (hard cover). ISBN 13 987-8-7890-3591-2. US$75.00.

Knitting the Semantic Web, edited by Jane Greenberg and Eva Méndez, thoroughly explains and explores the history and future of the Semantic Web (SW), while uniquely focusing on its application and connection to the world of library and information science (LIS). Written from a variety of library and Web industry perspectives, the reader is left with an understanding of SW and its potential.

Although the book is obviously for those interested in a deeper understanding of SW, this is not entirely an introductory text. Given the nature of the topic itself (and the depth and detail that many of the chapters go into), the book is best suited for an audience with both a basic knowledge of current Web technologies and terminology, as well as a familiarity with cataloguing and classification standards and issues. A knowledgeable (or at least strongly motivated) reader will learn much about the theory, standards, and practice of SW. Authored by a range of experts on a variety of topics, this book is well organized; each chapter flows cohesively into the next. Part I covers "Foundations, Standards, and Tools", while part II deals with specific "Projects and Perspectives".

The best two chapters in this book are also the two of most interest to you, the JCHLA reader. The first chapter, entitled "The Birth of the New Web: A Foucauldian Reading of the Semantic Web", by D. Grant Campbell, provides a fascinating start for this subject, aligning Foucault's 3-part history of medical practice with corresponding 3-part models of both SW and library catalogues. The other chapter of note (in part II), entitled "Biomedicine and the Semantic Web: A Knowledge Model of Visual Phenotype", by John Michon, discusses SW in the context of being able to connect information about observable characteristics to genetic differences. Not only are these two chapters health related, but they are also excellent examples of the two halves of this text, theory and practice, respectively.

What makes this work unique and important is its focus on the connection between SW and librarianship. Although an explicit mention of LIS is not present in every chapter, over half of them directly address library applications or roles, and both editors and almost half of the authorship are LIS professionals or academics.

A few messages ring loud and clear in this book: (1) SW can be exploited for library purposes, (2) SW issues are similar to many of those in the library world, and (3) libraries and librarians must have important roles in SW preparation and implementation. The fact that LIS people, practices, and institutions can and will be part of cutting-edge and practical technological steps forward, such as SW, is not mentioned enough in the LIS literature. This work contributes well to the effort to make our contribution clear to the nonlibrarian world.

Greenberg and Méndez's book is very optimistic about the future value of SW, nearly claiming that all our search engine and Internet woes will be solved by it. Even with half of the book devoted to actual applications of SW, the reader is still left with questions of whether a true SW is possible and if it might require too much effort. Of course, SW is still relatively new, with few fully formed examples, so perhaps such questions are unavoidable and maybe even vital to the movement at this early stage.

Looking beyond the text, there are several other elements of this book that illustrate that it has been well put together by its authors and editors. The wealth of colour and black-and-white illustrations, tables, and code examples help to communicate the more technical and abstract details of SW. The index is more than sufficient in providing access to the content from that direction, but there are some pages at the beginning that may serve as a barrier to the initial navigation of the work. (Because this monograph has been co-published as an issue of the journal *Cataloging & Classification Quarterly*, there are several pages devoted to other monographs in their collection and the indexing and abstracting services that provide access to the content.) The short biographies of the authors and editors are valuable in allowing the reader to judge the authority of the book as a whole.

Knitting the Semantic Web is an absolutely vital addition to any collection covering either information organization and cataloguing or Web technologies and trends, and the connection between the two in particular. Its discussion on both the theory and the application of SW would serve as an excellent primer for students, as well as a good resource for professionals considering the use of SW in their own projects.

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BOOK REVIEW / CRITIQUE DE LIVRE

Library 2.0: A Guide to Participatory Library Service. By Michael E. Casey and Laura C. Savastinuk. Medford, N.J.: Information Today, 2007. 172 pages (soft cover). ISBN 13 978-1-57387-297-3. CAN$29.50.

Written by experienced public library administrators Michael Casey and Laura Savastinuk (Gwinnett County Public Library), *Library 2.0: A Guide to Participatory Library Service* provides an overview of how to implement "Library 2.0"—a combination of "constant and purposeful change" (p. 12) and "user participation" (p. 14). The book is illustrated with useful real-world examples. If you are considering implementing Library 2.0 technologies in your library, Casey and Savastinuk's book is worth reading.

While the intended audience for this book is library administrators, particularly those in mid-sized to large public or academic libraries, the discussions on change management and on goal-directed evaluation of library services are certainly ones that every branch or service manager would benefit from reading. Casey and Savastinuk examine common library practices and suggest specific changes, via Library 2.0 technologies, which could fundamentally alter how libraries implement change, for the better. Detailed examples further illustrate and support the authors' discussion.

In general, this book should be read sequentially, as discussions in later chapters hinge on the concepts described earlier on. That said, chapter 6, "Incorporating Technology", contains good descriptions of the main technical components of Library 2.0 and can be read independently from the rest of the book. Furthermore, a detailed table of contents and an extensive index make it easy to find and revisit sections that were of particular interest.

Casey and Savastinuk's central theses, the need for constant and purposeful change, and the need for user participation are introduced in chapter 2. Here the authors identify the fundamental differences between how traditional libraries work versus the proposed new Library 2.0 approach. The third and fourth chapters further illustrate the implementation of change in a library context.

Drawing on concrete examples that illustrate "Business 2.0", chapter 5 examines the notion of the Long Tail, that is, the idea that the number of people who want something other than what you are offering is always greater than the number of people who want what you actually have. (To put it in library terms, the number of nonusers always exceeds the number of users.) This chapter goes on to describe how some libraries have tried to reach these nonusers by changing the way they offer and deliver their services.

The main technical components of Library 2.0 are described in chapter 6: blogs, wikis, instant messaging and chat, podcasting, and social networking tools. Ways in which libraries can use these technologies are discussed and illustrated with examples.

Chapter 7 looks at the importance of getting buy-in from staff and customers and how to do so effectively. In the authors' opinion, staff and customer buy-in is the most crucial element of a successful Library 2.0 implementation. "Maintaining the Momentum" (chapter 8) tackles how to incorporate changes into the daily life of the library and again emphasizes the importance of staff's make-or-break role in the maintenance of all services, including Library 2.0 services. The concluding chapter first briefly summarizes the preceding ones and then provides an extended example of a library operating under the principles outlined in the book.

The appendices, of which there are three, outline a survey that Casey and Savastinuk conducted and refer to frequently throughout the book. In addition, lists of the Web sites referred to in each chapter, and of further resources (both print and Web-based) are supplied for those readers who want to deepen their understanding of Library 2.0.

Several diagrams and screen captures from the various Web sites under discussion are included. Unfortunately, these information-heavy images are too small to be read comfortably and so are of limited usefulness. However, the Web site that accompanies the book, http://www.librarychange.com, provides readers with updated links to all of the Web pages referred to, allowing readers to display and more clearly view illustrations. Author contact information, a comprehensive list of seminal library-related blogs and Web sites, and book ordering information is also available from this Web site.

Library 2.0: A Guide to Participatory Library Service is well written and thoughtful in its examination of one effective way of incorporating a culture of change into a library environment. Casey and Savastinuk's book is a must-read for anyone involved in the management of libraries or who expect to implement any of the new Web 2.0 technologies in their library.

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NEWS AND NOTES / NOUVELLES ET NOTES

Compiled by Sophie Regalado

NEWS AND NOTES / NOUVELLES ET NOTES

MeSH vocabulary updated for 2008

NLM Technical Bulletin. 2007 November–December;359

The MeSH Browser (http://www.nlm.nih.gov/mesh/MBrowser.html) currently contains a link to the 2008 MeSH vocabulary. Searchers should consult the Browser to find MeSH headings of interest and to see these in relationship to other headings. The Browser contains MeSH Heading records that may include scope notes, annotations, entry terms, history notes, allowable qualifiers (subheadings), previous headings, and other information. It also includes Subheading records and Supplementary Concept Records (SCRs) for substances that are not MeSH Headings. This year, for the first time, the MeSH Tree Structures (http://www.nlm.nih.gov/mesh/trees2008.html) are available online in both PDF and HTML formats with all indented terms showing. For highlights about 2008 MeSH, see the forthcoming article, "What's New for 2008 MeSH", in the *NLM Technical Bulletin* (http://www.nlm.nih.gov/pubs/techbull/nd07/nd07_medline_data_changes2008.html).

A framework of guidance for building good digital collections

NISO Framework Working Group. National Information Standards Organization, December 2007
http://www.niso.org/framework/framework3.pdf

As the digital environment matured, the focus of digital collection-building efforts shifted toward the creation of useful and relevant collections that served the needs of one or more communities of users. The bar of "goodness" was raised to include levels of usability, accessibility, and fitness for use appropriate to the anticipated user group(s). Digital collection development has now evolved and matured to a stage where simply serving useful digital collections effectively to a known constituency is not sufficient. Issues of cost/value, sustainability, and trust have emerged as critical success criteria for good digital collections. Objects, metadata, and collections must now be viewed not only within the context of the projects that created them, but as building blocks that others can reuse, repackage, repurpose, and build services upon. "Goodness" now demands interoperability, reusability, persistence, verification, documentation, and support for intellectual property rights.

Reliability of journal impact factor rankings

Greenwood DC. *BMC Medical Research Methodology*. 2007 Nov 15;7(48)
http://www.biomedcentral.com/content/pdf/1471-2288-7-48.pdf

Journal citation reports are used widely as the basis for assessing research output. They are used by funding bodies to gauge the quality of publications, by researchers to assess which journals they choose to submit manuscripts to, and as a basis for journals to attract new subscriptions and advertising. Decisions placed on journal impact factors are potentially misleading where the uncertainty associated with the measure is ignored. This article proposes that caution should be exercised in the interpretation of journal impact factors and their ranks, and specifically, that a measure of uncertainty should be routinely presented alongside the point estimate.

Government retreats on copyright reform: Minister of Industry Jim Prentice delays plan to introduce controversial bill

CBC News. 13 December 2007
http://www.cbc.ca/canada/story/2007/12/13/tech-copyright-delay.html

A controversial bill that seeks to reform Canadian copyright laws will not be introduced this week, federal officials confirmed on Thursday. The House of Commons goes into recess for the holidays at the end of this week, meaning the bill could not be introduced until late January at the earliest. Prentice was expected to introduce the copyright reform bill earlier this week. The bill would have made such activities as the time-shifting of television shows, file-sharing of music and video, and copying files to CDs or MP3 players illegal. Prentice backtracked on the plan after more than 50 angry protestors showed up to question him at the meeting, and an online group formed to oppose it on the social networking site Facebook. The group was started by University of Ottawa professor Michael Geist, a chief opponent of the legislation, on 1 December 2007. More than 20 000 Facebook users have joined the group since then.

Opposition to copyright bill seems to have blindsided Prentice

McMurdy D. *Ottawa Citizen*. 12 December 2007

The game of politics has many rules. But probably one of the most important of all is this: never surprise or embarrass the boss. And yet, it would seem that that's exactly what's happened at Industry Canada over the contentious copyright reform file. Whatever the reasons or the context, Industry Minister Jim Prentice was, by many accounts, blindsided by the breadth and ferocity of opposition to the legislation he was expected to deliver before Parliament breaks for Christmas at week's end. If the minister was sufficiently moved by online petitions and a rally at his riding office over the past weekend to delay and revise the legislation, it's inevitable that those who favour a far more muscular copyright and intellectual property policy are now planning to turn up the heat on their aggressive lobbying efforts even more. Furthermore, the perceived victory among the cyber-rebels who have relentlessly attacked several of the principles that were expected to be included in the government's new policy, have also been encouraged to step up their efforts as well.

Research hospitals lobby for multi-year funding, national health research framework

Research Money. 2007 Dec 10;21(19)

Canada's research hospitals want the Science and Technology Strategy broadened to include multi-year funding and a national strategic framework for health research. In a 76-page report released 28 November 2007, the Association of Canadian Academic Healthcare Organizations (ACAHO) calls on all players involved in health research, from governments and funding agencies to teaching hospitals, to take steps it says are necessary for Canada to maximize investments in health research, innovation, and commercialization.

The Survey of Library Database Licensing Practices

Primary Research Group
http://primaryresearch.com

The study presents data from 90 libraries—corporate, legal, college, public, state, and nonprofit libraries—about their database licensing practices. More than half of the participating libraries are from the USA, and the rest are from Canada, Australia, the UK, and other countries. Data is broken out by type and size of library, as well as for overall level of database expenditure. The 100+ page study, with more than 400 tables and charts, presents benchmarking data enabling librarians to compare their library's practices to peers in many areas related to licensing.

Google and other people's content

Fine J. *Business Week*. **3 December 2007**
http://www.businessweek.com/magazine/content/07_49/b4061083.htm

The formula is familiar: Sell ads, in many cases around content Google does not own; turn over the bulk of that revenue to the owner of the content; repeat until the end of time. Google's revenues almost tripled, to $11.8 billion, in the first nine months of 2007, so it is hard to argue with its approach. However, really, how long can this go on? Not even the most ardent Google apologist claims its profits will balloon by the billion forever. Some perched in lofty places throughout the media biosphere advance a quietly radical notion: Google will start buying content companies. In fact, they say, Google will have no choice.

Copyright debate finds no shortage of missionary zeal

McMurdy D. *Ottawa Citizen*. **3 December 2007**

With controversial copyright reform legislation expected as early as this week, it might be worth remembering that bitter, bloody fights have been an integral part of this deeply divisive issue since at least the sixth century. While it is not likely that opponents of the imminent bill will lay siege to Parliament Hill or have anyone exiled, there is no shortage of missionary zeal swirling around this issue. And if, as expected, it reflects the influence of the powerful American entertainment lobby, there will certainly be backlash if not bloodshed. That's principally because copyright is a major point of intersection between culture and money—both of which tend to ignite rather strong feelings and opinions. Another element that makes it so controversial—and underscores why it's so important for the federal government to strike the right balance—is that, according to experts, aggressive copyright rules are "a one-way street" and very hard to reverse.

The Canadian DMCA: What you can do

Geist M. 2 December 2007
http://www.michaelgeist.ca/content/view/2431/125/

With the Canadian version of the Digital Millennium Copyright Act (DMCA) likely to be introduced within the next 2 weeks, there has been a remarkable outpouring of interest from individual Canadians about what they can do to have their concerns heard. The unfortunate reality is that there is nothing that can be done about what the bill will look like when it is introduced. Industry Minister Jim Prentice has simply decided to discard consumer, education, research, and privacy interests, ignore his own party's policy platform, and cave into US pressure. Once the bill is introduced, however, Canadians can send a message to their MPs, the ministers, and others, calling for a fair copyright bill that addresses Canadian concerns (those in Calgary can do so in person on 8 December as Prentice hosts an open house).

News publishers push for changes to search engine rules

Associated Press. 29 November 2007
http://www.cbc.ca/technology/story/2007/11/29/tech-news.html

Leading news organizations and other publishers have proposed changing the rules that tell search engines what they can and cannot collect when scouring the Web, saying the revisions would give site owners greater control over their content. Google Inc., Yahoo Inc., and other top search companies now voluntarily respect a Web site's wishes as stated in a document known as "robots.txt", which a search engine's indexing software, called a crawler, knows to look for on a site. Under the existing 13-year-old technology, a site can block indexing of individual Web pages, specific directories, or the entire site. Some search engines have added their own commands to the rules, but they are not universally observed.

Online library offers 1.5 million works and counting

Lombardi C. CNET News. 27 November 2007
http://www.news.com/Online-library-offers-1.5-million-works-and-counting/2100-1025_3-6220358.html?tag=newsmap

The Universal Digital Library, a book-scanning project backed by several major libraries across the globe, has completed the digitization of 1.5 million books and on Tuesday made them free and publically available. The online library offers full-text downloads of works that are in the public domain, or for which the copyright holder has been given permission to make available. Having the backing of prominent institutions such as the Bibliotheca Alexandrina in Alexandria, Egypt, however, the collection goes far beyond the widely available classics, though those are there, too.

Slow-starting e-books find niche markets

Svensson P. Associated Press. 4 December 2007
http://biz.yahoo.com/ap/071204/business_of_life.html

For a decade now, publishers have been hoping to wean readers off books and move them to electronic versions, which are much cheaper to produce and distribute. It just has not happened, even with the support of an electronics giant like Sony, which put out a dedicated e-book reader last year. Amazon.com Inc. recently followed up with its own reader. However, if you look away from the mainstream publishing industry, e-books are already a success in a few niches, where they are giving rise to new ways of doing business. Witness Gareth-Michael Skarka, a representative of one of our newest professions: the e-book publisher. "E-book publishers" that reformat printed books into electronic formats have been around for a while, but Skarka commissions, edits, and sells books that overwhelmingly never see print and would never have existed if it weren't for electronic publishing.

Synergies: Building national infrastructure for Canadian scholarly publishing

Devakos R, Turko K. *ARL Bimonthly Report*. **2007 July/Aug;252/253**
http://www.arl.org/bm%7Edoc/arl-br-252-253-synergies.pdf

Smaller multilingual countries face particular challenges in addressing the crisis in scholarly communication. Yet a nation's voice is often defined, and refined, through its literature, including that of scholarship and research. Fortunately the academic community has benefited from a series of recent and emerging partnerships in the production and dissemination of new knowledge. This paper describes a collaborative project addressing publishing and access to research whose contribution will include testing scalability and generalizability. During its 4-year grant term, Synergies will not only develop publishing services and expertise within Canadian libraries, it will deliver production-level services to publishers and editors.

University of Michigan librarian's new blog defends institution's deal with Google

Young JR. *The Chronicle of Higher Education*. **26 November 2007**
http://chronicle.com/wiredcampus/article/2565/u-of-michigan-librarians-new-blog-defends-institutions-deal-with-google

Paul Courant, who recently took the helm at the University of Michigan's libraries, has started a blog to defend the university's controversial book-scanning deal with Google, in which the search giant is digitizing and adding to its index millions of books from Michigan and a group of other major libraries. "I believe that the University of Michigan (and the other partner libraries) and Google are changing the world for the better," he wrote earlier this month in one of his first posts. "Google is on pace to scan over 7 million volumes from U-M libraries in six years at no cost to the University. As part of our arrangement with Google, they give us copies of all the digital files, and we can keep them forever."

University library goes digital

Expatica. 26 November 2007
http://www.expatica.com/be/articles/news/university-library-goes-digital-46310.html

Ghent University Library has teamed up with the Internet search engine Google in a deal that in time will make 300 000 books from the library's catalogue available to all via the World Wide Web. Ghent will be the first Belgian university library to make its collection available online. Soon anyone logging onto Google Book Search will be able to find digital versions of many of the books available in the famous Book Tower on Ghent's Blandijnberg. Ghent University will be the first to make a large number of Dutch-language books available. Ghent will also be only the second academic institution in the world (after BCU Lausanne in Switzerland) to make a large collection of French books available on the net.

Canada's digital info strategy stuck in an analog world

Geist M. 12 November 2007
http://www.michaelgeist.ca/content/view/2375/135/

In today's technological world, most content is "born digital", yet there remains a rich history of books, music, film, photos, and other works in analog form. Since people increasingly have access solely to digital content, policy makers must confront the challenge of how to bring all of our culture and historical knowledge into the digital realm. The strategy makes for sobering reading: Canada may have once been a world-leader in Internet access, yet today it finds itself years behind other countries in developing a clearly focused strategy to link digital access with digital information. Most of our major trading partners, including the United States, European Union, Australia, New Zealand, and China have already established digitization strategies that feature robust programs and ambitious plans.

Copyright Act key to Canada's industrial strategy

McMurdy D. *Ottawa Citizen*. **16 November 2007**

For most Canadians, the intense behind-the-scenes wrangling and lobbying over the terms of a revised Copyright Act—for which legislation will be tabled in the next 4 weeks—is background noise at the very most. Intellectual property is such an abstract notion, after all. And how can you possibly protect an idea or determine its ownership—especially in the age of file sharing and Internet access? The complex answers to those questions are among the many reasons why the long promised reform of this law has been delayed for so many years. Even Liberal governments with big, juicy majorities were unable to make it happen. But the copyright issue—which has been flagged as the biggest economic issue between Canada and the US since the end of the softwood lumber war a year ago—recently surfaced as a priority in the throne speech and there have been renewed efforts by the officials in both the Industry and Heritage departments to put together a bill that will be able to withstand the inevitable political pressure.

Alternatives to bonuses

Steele C. *The Australian*. 31 October 2007
http://www.theaustralian.news.com.au/story/0,25197,22675134-21682,00.html

Michael Good's suggestion ("Push for medical research grouping", HES, October 24) to pay staff bonuses of up to $5000 for papers in high-impact journals resembles election promises in that perceived short-term gain for a local area distorts consideration of long-term structural and economic change across the nation. What is at stake here is scholarly communication worldwide and the dissemination of Australian research. The search for higher citation rankings plays into the hands of increasingly dominant multinational publishers, whose main loyalty is to shareholders rather than to academe, which by and large gives away research and copyright in an increasingly frantic rush to publish or perish. In 2006, 20 publishers accounted for 84% of revenues of the US$11 billion publishing market in science, technology, and medicine. The top five STM publishers account for 50% of the market.

Internet2 and libraries: serving your communities at the speed of light

Werle J, Fox L. *Computers in Libraries*. 2007 Nov/Dec;27(10)
http://www.infotoday.com/cilmag/nov07/Werle_Fox.shtml

Formed in 1996, Internet2 is a not-for-profit advanced network consortium led by the US research and higher education community. Its goals are to provide leading-edge network capabilities and to facilitate the development, deployment, and use of revolutionary Internet technologies. Starting with 34 universities, Internet2 has grown to more than 300 members, including more than 200 US universities working in cooperation with 70 leading corporations, 45 government agencies, laboratories, and other research institutions. With fewer users and a backbone made entirely of fiber-optic cables, Internet2 is capable of moving data thousands of times faster with more consistent levels of performance than the commodity Internet. This has clear implications for those embracing the principles of a user-centered, multimedia-rich, socially engaged, and community-innovative library embodied by Library 2.0.

Open access to research funded by US is at issue

Weiss R. *The Washington Post*. 1 November 2007
http://www.washingtonpost.com/wp-dyn/content/article/2007/10/31/AR2007103102668.html

At issue is whether scientists funded by the National Institutes of Health should be required to publish the results of their research solely in journals that promise to make the articles available free within a year after publication. The idea is that consumers should not have to buy expensive scientific journal subscriptions—or be subject to pricey per-page charges for nonsubscribers—to see the results of research they have already paid for with their taxes. Until now, repeated efforts to legislate such a mandate have failed under pressure from the well-heeled journal publishing industry and some nonprofit scientific societies whose educational activities are supported by the profits from journals that they publish. But proponents—including patient advocates, who want easy access to the latest biomedical findings, and cash-strapped libraries looking for ways to temper escalating subscription costs—have parlayed their consumer-friendly "public access" message into legislative language that has made it into the Senate and House versions of the new Department of Health and Human Services appropriations bill.

Google takes aim at wireless industry with open software alliance

CBC News. 5 November 2007
http://www.cbc.ca/technology/story/2007/11/05/tech-google.html

Google Inc. finally announced its intentions for the mobile phone industry Monday with the unveiling of the Open Handset Alliance, a group of manufacturers, technology companies, and wireless carriers that are aiming to free up handsets with free software. Google has criticized wireless carriers for keeping a tight grip on what sort of software consumers can put on their phones, holding back the development of the mobile Internet. Rumours about what the company would do have been circulating for months.

Rethinking collections – libraries and librarians in an open age: a theoretical view

Morrison H. *First Monday*. 2007 Oct 1;12(10)
http://www.uic.edu/htbin/cgiwrap/bin/ojs/index.php/fm/article/viewArticle/1965/1841

Open access, one of the most important of the potentials unleashed by the combination of the electronic medium and the World Wide Web, is already much more substantial in extent that most of us realize. More than 10 percent of the world's scholarly peer-reviewed journals are fully open access; this does not take into account the many journals offering hybrid open choice, free back access, or allowing authors to self-archive their works. Scientific Commons includes more than 16 million publications, nearly twice as much content as Science Direct. Meanwhile, even as we continue to focus on the scholarly peer-reviewed journal article, other potentials of the new technology are beginning to appear, such as open data and scholarly blogging. This paper examines the library collection of the near and medium future, suggests that libraries and librarians are in a key position to lead in the transition to an open age, and provides specific suggestions to aid in the transition.

When Wikipedia is the assignment

Guess A. Inside Higher Ed. 29 October 2007
http://insidehighered.com/news/2007/10/29/wikipedia

Wikipedia: time-saver for students, bane of professors everywhere. Or is it? If there's one place where scholars should be able to question assumptions about the use of technology in the classroom (and outside of it), it is the annual Educause conference. At a morning session featuring a professor and a specialist in learning technology from the University of Washington at Bothell, presenters showed how Wikipedia—often viewed warily by educators who worry that students too readily accept unverifiable information they find online—can be marshaled as a central component of a course's syllabus rather than viewed as a resource to be banned or reluctantly tolerated.

When is open access not open access?

MacCallum CJ. *PloS Biology*. **2007 Oct 16;5(10)**
http://biology.plosjournals.org/archive/1545-7885/5/10/pdf/10.1371_journal.pbio.0050285-S.pdf

Since 2003, when *PLoS Biology* was launched, there has been a spectacular growth in "open-access" journals. The Directory of Open Access Journals (http://www.doaj.org/), hosted by Lund University Libraries, lists 2816 open-access journals as this article goes to press (and probably more by the time you read this). Authors also have various "open-access" options within existing subscription journals offered by traditional publishers (e.g., Blackwell, Springer, Oxford University Press, and many others). In return for a fee to the publisher, an author's individual article is made freely available and (sometimes) deposited in Pub Med Central (PMC). But, as open access grows in prominence, so too has confusion about what open access means, particularly with regard to unrestricted use of content—which true open access allows. This confusion is being promulgated by journal publishers at the expense of authors and funding agencies wanting to support open access.

Future reading: digitization and its discontents

Grafton A. *The New Yorker*. **31 October 2007**
http://www.newyorker.com/reporting/2007/11/05/071105fa_fact_grafton

Google's projects, together with rival initiatives by Microsoft and Amazon, have elicited millenarian prophecies about the possibilities of digitized knowledge and the end of the book as we know it. Predictions have ranged from all books in the world becoming "a single liquid fabric of interconnected words and ideas" to a universal archive that will contain not only all books and articles but all documents anywhere—the basis for a total history of the human race. In fact, the Internet will not bring us a universal library, much less an encyclopedic record of human experience. None of the firms now engaged in digitization projects claim that it will create anything of the kind. The hype and rhetoric make it hard to grasp what Google and Microsoft and their partner libraries are actually doing.

Canada playing catch-up: Alberta takes Canadian lead in efforts to integrate cyber infrastructure assets

Research Money. **2007 Oct 29;21(16)**

After watching other nations take the lead, Canada is finally moving on developing its cyber infrastructure (CI) for the research community with longer terms sights set on industry. Alberta is the first out of the gate with the creation earlier this year of Cybera Inc., a not-for-profit organization designed to deliver integrated services and solutions to provincial researchers utilizing CI technologies. Cybera was formed out of Netera Alliance, a regional high-speed research network serving Alberta. It aims to make CI a shared utility that can be used by any organization or company on demand.

Canadian Digital Information Strategy (CDIS)

Library and Archives Canada. 30 October 2007
http://www.collectionscanada.gc.ca/cdis/012033-1000-e.html

The draft version of the Canadian Digital Information Strategy has been released for public comment. The strategy results from a series of meetings that took place across the country in 2005 and 2006 to gather views from content producers, users, and government officials. In the course of the deliberations, more than 200 stakeholder organizations offered ideas or commentary, and nearly 100 of Canada's leading thinkers from across the information environment participated in a national summit in December 2006. Building on this rich set of input, the strategy has been drafted by a 24-member development committee. It addresses some of the critical issues in digital information production, preservation, and access, and proposes a range of actions to strengthen the Canadian digital information environment.

Libraries shun deals to place books on Web

Hafner K. *The New York Times*. **22 October 2007**
http://www.nytimes.com/2007/10/22/technology/22library.html?em&ex=1193284800&en=498fd16826652493&ei=5087%0A

Several major research libraries have rebuffed offers from Google and Microsoft to scan their books into computer databases, saying they are put off by restrictions these companies want to place on the new digital collections. The research libraries, including a large consortium in the Boston area, are instead signing on with the Open Content Alliance, a nonprofit effort aimed at making their materials broadly available.

E-books multiply, but who's reading them?

Collins C. *The Chrsitian Science Monitor*. **19 October 2007**
http://www.csmonitor.com/2007/1019/p11s02-stgn.html

Digital evolution has long since swept the audio and video realms, leaving holdout purists clinging to tubes, vinyl, and film. Holding back the broad digitization of books—besides the special sensory experience they deliver in their traditional form—has been a spotty digital inventory and the lack of a dominant device for displaying them. But as habits change and content inventory nears critical mass (Google, to name one prospective repository, is still wrangling with copyright issues), digital books might finally gain a foothold, observers say—not as a replacement format, but as an alternative delivery system not unlike the audiobook. Both the publishing industry and the reading public appear to be shaking the notion that for the beloved book, digital equals death.

Library of Congress and UNESCO sign World Digital Library agreement

Lamolinara G. The Library of Congress. 17 October 2007
http://www.loc.gov/today/pr/2007/07-196.html

Librarian of Congress James H. Billington and UNESCO Assistant Director for Communication and Information Abdul Waheed Khan today signed an agreement at UNESCO headquarters in Paris pledging cooperative efforts to build a World Digital Library Web site. The World Digital Library will digitize unique and rare materials from libraries and other cultural institutions around the world and make them available for free on the Internet. These materials will include manuscripts, maps, books, musical scores, sound recordings, films, prints, and photographs. The objectives of the World Digital Library include promoting international and intercultural understanding, increasing the quantity and diversity of cultural materials on the Internet, and contributing to education and scholarship.

Max Planck Society terminates licensing contract with Springer publishing house

heise online. 19 October 2007
http://www.heise.de/english/newsticker/news/97652

Following several fruitless rounds of talks the Max Planck Society (MPG) has, effective 1 January 2008, terminated the on-line contract with the Springer publishing house that for 8 years now has given all institutes electronic access to some 1200 scientific journals. The analysis of user statistics and comparisons with other important publishing houses had shown that Springer was charging twice the amount the MPG still considered justifiable for access to the journals, the Society declared. "And that 'justifiable' rate is still higher than comparable offers of other major publishing houses," a spokesman of the Max Planck Digital Library told heise online.

Mandate for public access to NIH-funded research poised to become law

The Alliance for Taxpayer Access. 24 October 2007
http://www.taxpayeraccess.org/media/release07-1024.html

The US Senate last night approved the FY2008 Labor, HHS, and Education Appropriations Bill (S.1710), including a provision that directs the National Institutes of Health (NIH) to strengthen its Public Access Policy by requiring rather than requesting participation by researchers. The bill will now be reconciled with the House Appropriations Bill, which contains a similar provision, in another step toward support for public access to publicly funded research becoming United States law.

Preservation in the age of large-scale digitization: a white paper

Rieger OY. Council on Library and Information Resources. February 2008
http://www.clir.org/pubs/reports/pub141/pub141.pdf

The digitization of millions of books under programs such as Google Book Search and Microsoft Live Search Books is dramatically expanding our ability to search and find information. For scholars, it is the unparalleled scale of these undertakings that holds such promise. But it is likewise the scale of such projects that gives rise to concerns that the quality of the digitized material is inconsistent and that the files sometimes lack important bibliographic information in their metadata. The primary aim of large-scale digitization projects—quantity rather than quality—presents a mixed blessing for many scholars and library staff who have worked so hard to create high-quality digital surrogates for their print collections. At the same time, large-scale digitization poses challenges for those who hold responsibility for maintaining these massive new collections. The point of the large-scale projects—to make content accessible—is interwoven with the question of how one keeps materials, whether digital or print, fit for use over time.

The future of electronic paper

Genuth I. The Future of Things. 15 October 2007
http://www.tfot.info/articles/1000/the-future-of-electronic-paper.html

Thirty-five years in the making, electronic paper is now closer than ever to changing the way we read, write, and study—a revolution so profound that some see it as second only to the invention of the printing press in the 15th century. Made of flexible material, requiring ultra-low power consumption, cheap to manufacture, and—most important—easy and convenient to read, e-papers of the future are just around the corner, with the promise to hold libraries on a chip and replace most printed newspapers before the end of the next decade. This article covers the history, technology, and future of what will be the second paper revolution.

New site search engine allows easier, more efficient navigation of MedlinePlus and NLM Web site

National Library of Medicine. 11 October 2007
http://www.nlm.nih.gov/news/searchengine_vivisimo.html

On Thursday, 11 October, the National Library of Medicine (NLM) released a new search engine for MedlinePlus, MedlinePlus en español, and the NLM Library Web site. NLM has made this change to better meet the expectations and preferences of the millions of people who use NLM Web sites each month. After extensive research, NLM selected search engine software from the Pittsburgh-based company Vivisimo. Vivisimo is also the current search solution for the www.usa.gov site (formerly FirstGov), which contains online information from the entire spectrum of US government agencies. The new search results feature enhanced relevance rankings and boldface search words in context to help users select the best Web documents for their queries.

New assessment focuses on measuring return on health research investments

Research Money. **2007 Oct 10;21(15)**

Return on investment (ROI) stemming from Canadian health research is the focus of a major new assessment by the Canadian Academy of Health Research (CAHS). The assessment will be conducted over the next 12 months to determine the best metrics for measuring ROI of health research from all sectors and funding organizations from the Canadian Institutes of Health Research and provincial governments to pharmaceutical firms and not-for-profit organizations.

Anti-open access group loses another supporter

Gawrylewski A. *Scholarly Communication News*. **8 October 2007**
http://4sustainability.blogspot.com/2007/10/anti-open-access-group-loses-another.html

Another university press has disassociated itself from PRISM—the Partnership for Integrity in Science and Medicine—an anti-open access advocacy group established by the Association of American Publishers (AAP). MIT Press director Ellen Faran resigned from AAP's Professional and Scholarly Publishing Division. Faran told *The Chronicle* in an e-mail, "The Prism Web site continues to give the incorrect impression that it has the unanimous support of the Executive Council [of the AAP]."

Meetings, conferences, and workshops

CHLA / ABSC 2008 Conference / Congrès 2008

The Canadian Health Libraries Association / Association des bibliothèques de la santé du Canada annual conference, "Navigating the Seas of Change / Naviguer sur les mers du changement", will be held on 26–30 May 2008, in Halifax, Nova Scotia, Canada. For details, check the conference Web site at http://www.chla-absc.ca/2008/.

International Copyright Symposium – Amsterdam World Book Capital Foundation

The symposium will be held on 21–22 April 2008, in Amsterdam, Netherlands. For more information, check the conference Web site at http://www.amsterdamworldbookcapital.com/index.cfm?page=Programme%20symposium.

2008 Medical Library Association (MLA) Annual Meeting

This year's MLA meeting will take place in Chicago, Illinois, USA, on 16–21 May 2008. For details, check the conference Web site at http://www.mlanet.org/am/am2008/.

CLA 2008 Annual Conference and Trade Show

The Canadian Library Association / Association Canadienne des Bibliothèques conference will be held on 21–24 May 2008, in Vancouver, British Columbia, Canada. For more information, check the conference Web site at http://www.cla.ca/conference/2008/index.htm.

SLA 2008 Annual Conference

The Special Libraries Association (SLA) annual conference will be held in Seattle, Washington, USA, on 14–17 June 2008. For details, check the conference Web site at http://www.sla.org/content/Events/conference/ac2008/index.cfm.

Professional development

FIS Professional Learning Centre: Mastering Web searching (Web)

14 April – 2 June 2008 (7 weeks)
Instructor: Gwen Harris
Fee: $395.00 (US$395.00)

Which Web search engines are the best? What tool should be used for what purpose? How are they best used? How can I find answers to my questions more quickly? This in-depth course will help build skills in using the main tools and most effective strategies for searching the Web. Mastering Web Searching is a 7-week course conducted entirely via the Internet. The tours, exercises and assignments in this course along with direct tutoring from the instructor will give you the hands-on experience you need to search the Web more effectively.

FIS Professional Learning Centre: The information professional as educator – A PLC train-the-trainer course (Web)

12 May – 29 June 2008 (7 weeks)
Instructor: Rebecca Jones
Fee: $395.00 (US$395.00)

The technological and organizational changes affecting the workplace have increased the importance of training and staff development as an organizational imperative. As organizations expand their investment in information resources and technologies, they increasingly recognize that effective learning is a prerequisite to effective decision-making. Information professionals, with their specialized knowledge of information content, tools, and processes, are well placed to play key roles as organizational learning leaders. This 7-week course will assist you in assessing the learning needs of your organization and show you how to design an effective training program, whether it be based on a delivery method that is face-to-face, e-learning, or blended learning. The course will introduce strategies for making learning for adults interactive and relevant and will also present methods for evaluating and determining the Return on Investment of your training activities.

Education Institute: Search engines 101: How search engines work (audio conference)

10 April 2008
3:00 pm ET (1 hour)
Instructor: Rita Vine
Member: $72.00
Non-Member: $88.00

If you use the Web, you've certainly used Google, and maybe other search engines too. But do you really know what a search engine is? For serious searchers, it's important to understand what's "under the hood" of search engines. How do they create their databases? What is included? Omitted? Why do search engines rank order results so differently? How does ranking work? And what about all those ads that appear—can they affect search results?

Education Institute: Search engine master class – Finding, choosing and using the best advanced features of the major search engines (online course)

21 April – 30 May 2008 (6 weeks)
Instructor: Rita Vine
Member: $190.00
Non-Member: $240.00

Search engines now offer so much beyond the keyword search box! All the major engines (Google, Yahoo, Ask, Gigablast, Live, and Exalead) offer substantial sets of advanced features and shortcuts, which can help serious searchers break through the clutter of the Web to access more meaningful results. Many of the major search engines also offer outstanding "secondary" search tools (like Google's Google Scholar) to help serious searchers find information that would otherwise be lost in huge search results lists. In this course, you'll learn the best features of the major search engines, how they work, plus practical methods for applying the features in your own Web searching.

Education Institute: Library 2.0 without all the MySpace hype – How to use social tools to solve problems (Web conference)

14 April 2008
2:00 pm ET (1 hour)
Instructor: Jessamyn West
Member: $75.00
Non-Member: $95.00

Social tools can assist libraries with tight budgets and small staff in solving problems. This session will review the idea of social software in libraries and discuss the Library 2.0 delivery model in simple language using lots of examples of 2.0 problem solving with library examples and very few buzzwords. While the focus will be on patron interaction, tools for interlibrary communication and solutions will be discussed as well.