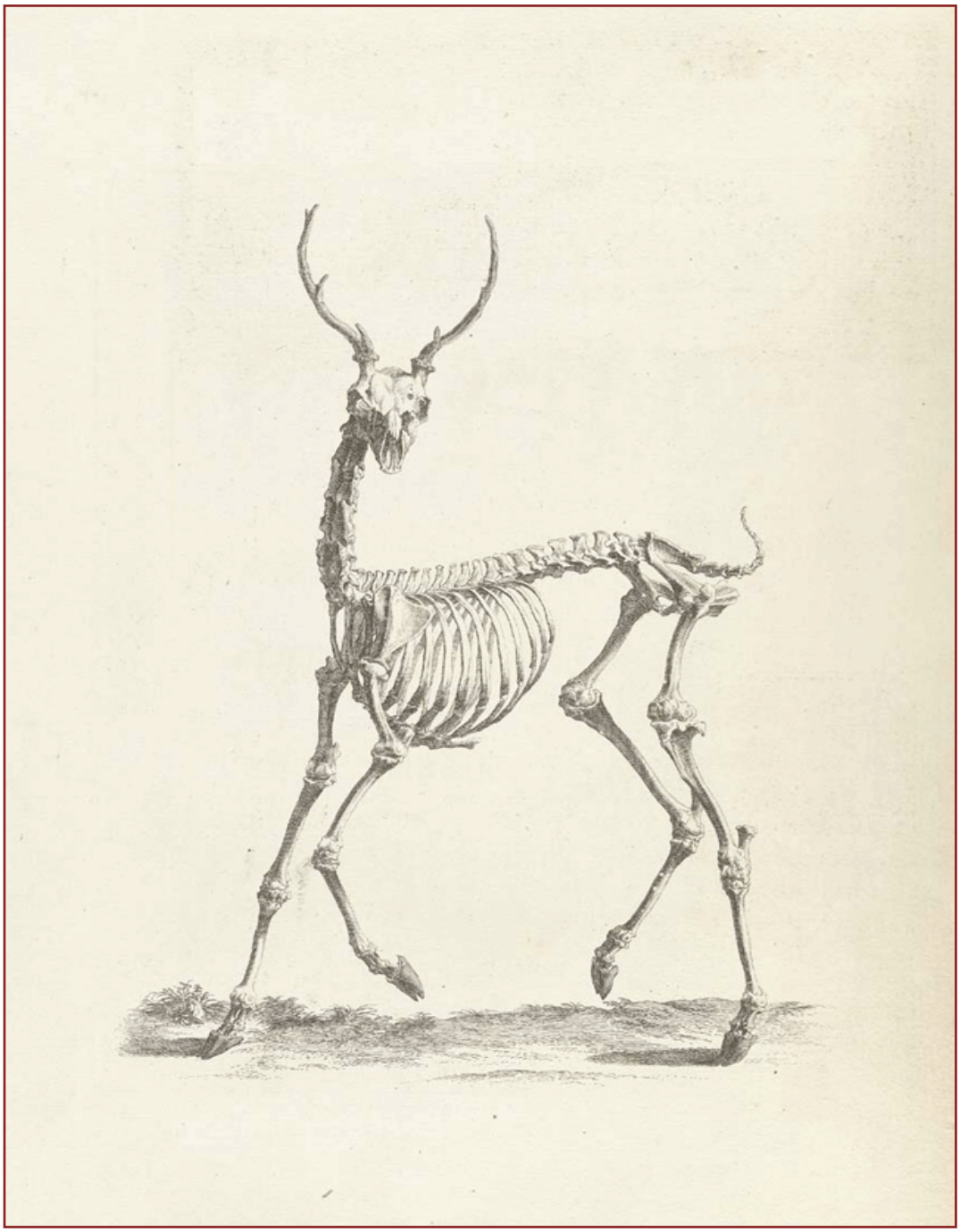
HYPOTHESIS

The Journal of the Research Section of MLA



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HYPOTHESIS

The Journal of the Research Section of MLA

COLUMNS

NEWS

Cover Art (Courtesy of the National Medicine):

The image of an deer skeleton above is from William Cheslden's *Osteographia, or the anatomy of the bones,* published in 1733. For more information and images visit the NLM's Historical Anatomies on the Web. This digital project includes numerous high quality images from the library's important anatomical atlases.

Have an image you'd like see on the cover? Please let Co-editor Lisa know!

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CHAIR'S COLUMN

Rosalind F. Dudden, MLS DM/AHIP FMLA
Gerald Tucker Memorial Medical Library, National Jewish Health

As I start my term as chair of the Research Section, I am already very aware of the legacy of past chairs that I need to carry forward. Particularly, Susan Lessick. Susan did a fantastic job last year. She found editors for the Hypothesis, getting it started after a hiatus, and Lisa Ennis and Kathel Dunn are continuing for another informative year. She continued Molly Harris's work on the Research Awards committee and recruited Kris Alpi and Ruth Fenske to continue this important program. They have revamped the program and procedures and our winners, along with other section awards, were printed in the awards program at the MLA Awards Luncheon in Honolulu. Susan started a Research Mentoring Planning Task Force and a Strategic Planning Task Force that will be working hard this year. And don't forget the bylaws changes and Section Council Changes during the year. All during the year, she and Alan Barclay worked on a redesign of the website with a new logo. It looks fantastic. Our new triangle logo was used at the Hawaii meeting to designate research papers in the program. This was finally accomplished after several years of planning. And we have a new brochure. You can read more about Susan's initiatives in last year's editions of this column. So, thank you, Susan!

And thanks to all the people who worked on section business and section programming last year. Many are staying on and I hope we have as productive a year as last year!

At MLA 09 in Honolulu in May, our program sessions were well attended. We even had a session on the last day in the last hour, opposite a plenary session and 40 people attended. Well done, to those interested in research reports! Diane Cooper, our Chair-Elect, is already hard at work organizing the program for next year at MLA 2010 in Washington, D.C.

It is my intent to continue Susan's good work and keep communication flowing. I have started a procedure manual using a wiki and hope to have assistance this year further developing it. Watch for announcements about our goals for 2010. Contact me if you want to work on a committee. We will be starting work on our various projects very soon and we need all the help we can get.

Become involved in your section! Volunteer! E-mail me at duddenr@njhealth.org.

LITERATURE REVIEW

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For more information about the purpose of the Literature Review column, see the summer 2008 issue of Hypothesis.

There have been several research studies on the use of social networking tools.

Aharony N. Web 2.0 use by librarians. *Lib Inf Sci Res*. 2009 Jan;31(1):29-37.

Luzón MJ. Scholarly hyperwriting: the function of links in academic weblogs. *J Am Soc Inf Sci Technol*. 2009 Jan;60(1):75-89.

Aharony looked at the effect of social variables on Israeli librarians' use of Web 2.0. Questionnaires were sent to 250 randomly selected Israeli school, academic, and public librarians in the summer of 2007 via mail and e-mail. The response rate was 67.2% (168 librarians). She describes the characteristics of the respondents but doesn't compare the respondents to the population under study. The study was composed of ten short questionnaires which are given in an appendix. Several of the questionnaires had been previously validated by the author. Cronbach's alpha coefficients are given for each one.

The text says that Web 2.0 use was measured by five yes/no questions on the use of Web 2.0 applications. The appendix shows that ten questions were asked, making it hard to tell what the reported 2.36 applications used with a 1.29 standard deviation really means.

The more motivated, the more importance attributed to Web 2.0, the more felt capability, and the more challenging they perceive Web 2.0 to be, the more they use it. Amount of challenge is a greater inducement that threat is a deterrent. Library managers used Web 2.0 more than librarians. There were no other statistically significant correlation between personal characteristics and attitudes toward Web 2.0 use.

Over fifty-nine percent of the respondents rated themselves as having a medium level of computer expertise. Almost fifteen percent thought they had high expertise and 26%, low. As would be expected, those with high expertise felt a greater capacity to master Web 2.0 applications, were more motivated to use it, used it more, and were less threatened by it. There was little difference among the three ability groups on how important they think Web 2.0 is and how challenging they think it is.

Looking at the effect of three personality characteristics, those who are more extroverted use Web 2.0 more. Resistance to change was significantly correlated with how important they feel Web 2.0 is, how threatened they feel, and how much they use Web 2.0. Here again, the discussion does not seem to agree with the table. The degree of empowerment was significantly correlated with seeing Web 2.0 as a positive challenge and less as a threat.

Hierarchical regression analysis showed that the variables entered explained 49.8% of Web 2.0 use. As might be expected, there were some important interactions among the independent variables.

These findings agree with findings from several research studies published in the literature of psychology. Although the results are what would be expected, the finding that library managers use Web 2.0 more than librarians was surprising. One would expect that younger librarians in non-managerial positions would have a better attitude toward Web 2.0 and be more likely to use it. She does tell us that there are no significant correlations between age and number of years of experience as a librarian and between those variables and attitude toward web 2.0 use, as measured by several variables.

To me, these findings reinforce the value of MLA's having promoted the use of Web 2.0 by offering a free online course on its use last year. Perhaps taking the course improved the participants' attitude toward Web 2.0 and their sense of empowerment, one of the vari-

ables in this study.

María José Luzón studied links in academic blogs. The idea is that hyperlinks in blogs are analogous to citations in journal articles. She carefully described the process used to randomly select fifteen academic blogs, from a variety of disciplines, for study. Only blogs in which most entries related to research and discipline-related content were eligible for selection.

For each of the fifteen blogs chosen, she looked at links that appear at the top and bottom of each page (what she calls entry links) and sidebar links. All fifteen blogs had an entry link to the comments page for that entry and 11 had a link to the permanent url for the entry. Ten of the fifteen blogs had links to information about the blogger in the sidebar. Fourteen had links to other sites of interest. Twelve had links to the archive for the blog and twelve had links to feed links and/or e-mail forms. Over half had links to sites that ranked blogs by popularity.

She also looked at in-post links and comments on those posts. For in-post links, for each blog, she analyzed links in the first ten post- February 1, 2007 posts that included links, and she did likewise for comments. It appears that 577 links appearing in the posts and 160 links appearing in the comments were analyzed. With 87% agreement, she and a second coder classified 300 of the 737 links into a scheme she devised, based on previous research.

For the in-post links, of the 577 links classified, 194 were to the blogger's own pages. The majority were to pages within the same blog, but some were links to the blogger's articles and other work. Another 180 links were to other places in the blogging community with which the blogger's contacts had some affinity and 203 were to what she calls external links (i.e. to places not directly associated with the blogger or his/her online community). Many of these are links to news articles or other websites. There were many fewer links in the comments than in the blogger's posts. The most frequent type of link is to an external site that could provide further information.

Table 5 summarizes the types of links she found and the rhetorical function she assigned to each category. No frequencies are given, but she does give percentages of the total for each category. Many of the categories of link are attributed to publicity or identity-formation for the blogger or the blog or community formation.

This is pretty far afield from the reasons for citation given in information scientists' citation studies. Luzon is a professor of English and German philology. It would be interesting to see if an information scientist would have categorized the functions of the hyperlinks in the same way. One can also ask if academic blogs are a fundamentally different form of scientific communication from what we have known in the past. If so, it would be desirable for someone to do a comparable study from an information scientists' point of view.

Several articles on reference services have been published.

Martell C. The absent user: physical use of academic library collections and services continues to decline 1995-2006. *J Acad Libr*. 2008 Sep;34(5):400-7.

Applegate R. Whose decline?: which academic libraries are "deserted" in terms of reference transations? *Ref User Serv Q*. 2008 Winter;48(2):176-188.

Banks J and Pracht C. Reference desk staffing trends; a survey. *Ref User Serv Q*. 2008 Fall;48(1):54-9.

Ryan SM. Reference transactions analysis: The cost-effectiveness of staffing a traditional academic reference desk. *J Acad Libr*. 2008 Sep;34(5):389-99.

Granfield D, Robertson M. Preference for reference; new options and choices for academic library users. *Ref User Serv Q*. 2008 Fall;48(1)44-53.

Charles Martell provides data on academic library use from 1995 to 2006. Circulation for medical school libraries went up between 1995 and 1999 but has declined 58% overall since 1995. It appears that his data take into account only medical libraries in ARL institutions.

The decline in circulation was much greater than for law, Ivy League, and public, and private universities. Possibly this is because many standard medical sources have been available electronically for quite a while. Reference transactions for medical school libraries also increased between 1995 and 1999 but fell 41% overall between 1995 and 2006. Only law school libraries experience less of a decrease in reference transactions. In so far as these data take into account telephone and electronic reference, perhaps this tells us that users of medical and law school libraries still realize they need help using resources, even if they no longer check out books.

Rachel Applegate attempts to demonstrate that the decline in number of reported reference transactions from 2000 to 2004 arose more from ARL and other doctoral granting institutions than from master's and baccalaureate institutions. Although medical school libraries would be classified as being in doctoral institutions, many academic health sciences libraries would be master's, or possibly, baccalaureate institutions.

Reference transactions per week were down an average of 2.2% for all types of institutions; for ARL and other doctoral granting institutions, the decline was in the 7% range. Overall, average reference transactions per FTE student was down 5.6%, with ARL and other doctoral granting institutions down in the 9 to 10% range.

Turning to average questions per week per librarian, she found there was an overall increase in average questions per week per librarian but a decrease in ARL libraries. Results were similar when she calculated average questions per week per total staff of all types. She attributes the decrease in average questions per week per librarian in ARL institutions to the fact that ARL institutions had the least percent change in the number of students per librarian between 2002 and 2004.

She points out that these data do not consider who actually answers reference questions. An increase in average questions per librarian could merely indicate that staff and student assistants have assumed an increasing proportion of the reference work in the non ARL institutions. This analysis is convincing as far as demonstrating an overall decline in reference transactions per week and average questions per week per FTE student, particularly in ARL libraries. It is more confusing and less convincing in regard to average questions per week per librarian, because the data do not account for who actually answered the reference questions. In any event, the Martell study, discussed above, would appear to be of more use to health sciences librarians, because it uses more recent data and does give breakouts for medical libraries, although only for medical libraries in ARL institutions.

Banks and Pracht looked at trends in reference desk staffing in mid-sized academic libraries. After doing a pilot test, they sent a 20-question survey via the Internet to heads of reference in a random sample of 191 of 371 academic libraries serving 5,000 to 15,000 students. It appears that 94 usable returns were received, making a 50% return rate for the 188 surveys that were delivered. They then did an e-mail follow up with respondents who said they use non-professionals at the reference desk.

Almost half the respondents reported that the number of reference questions had gone down in the last three years. (The date of data collection is not given.) One quarter reported an increase in the number of reference questions. Only fifteen libraries reported decreased staffing at the reference desk and 22 had increased staffing; this appears to refer to numbers of personnel at any level staffing the reference desk.

Sixty-two used non-degreed personnel at the reference desk. The majority had adopted this practice in the last ten years. Most cited cost-effectiveness and the need to free up MLS personnel for other duties as the reason. Percent of total desk time covered by non-degreed personnel ranged from 10 to 75%. They also found it is "definitely standard practice to use nonprofessionals at the reference desk even when no backup is available." Criteria for hiring non-professionals to work varied widely; most were given at least some training.

This study documents the increased used of non-degreed personnel at the reference desk in mid-sized academic libraries. It does not tell us anything about aca-

demic health sciences libraries specifically.

Susan Ryan studied the cost-effectiveness of staffing a reference desk, based on librarian's salaries and the types of questions asked. Reference librarians at Stetson University were asked to write down all reference questions and the source(s) used to answer the questions for two months in the fall of 2002 and 2006 and two months in the spring of 2003 and 2006. "Non-informational" and machine questions (n=2528) were not logged. There were a total of 4431 reference questions for which 6356 sources were used.

Thirty-five percent of recorded reference questions were answered using only personal knowledge of the library and its collection. Only 2.6% of the titles in the print reference collection were used to answer questions. Fifty-seven percent of the 6356 sources used were online sources (OPAC, databases, and the Internet). Seventy-five percent of the time, only one source was used to answer a question.

Of the 6959 questions total, 36.3% were non-information directional and technology questions. Over fifteen percent concerned locations of call numbers and known item look ups were nine percent. An additional 12.4% were non-routine technology questions. The author assumed that each of these categories could be answered by a trained staff member as well as by a librarian. That left only 1867 (26.8%) of the total questions that were considered true reference questions. Of these, 11.3% of the total were classified as "research" questions, the only category they consider to require routine librarian intervention. She concludes that "89% of the reference transactions in this study could be handled by students or staff trained in basic knowledge of the library's electronic resources, hardware and software issues, and procedures and policies, with occasional referral to a librarian."

Turning to cost-effectiveness, she then calculated that the cost of having five full-time and three part-time librarians answer all questions at the desk was $7.09 per transaction. She was also able to determine that, of the 32.4 average transactions per day, only 3.6 could be classified as research questions. The media number of sources need to answer "research" questions was 2.2. She argues that this does not support the idea that even questions that require the attention of a librarian are in depth or complex.

Despite all this data, she concludes that further user surveys would be required before implementing a new service model. An interesting theme running through this article is the idea that "the ability to search huge amounts of information online in minutes makes once obscure questions fairly easy to address." Hence, it is more feasible for users to find things on their own and libraries to staff the reference desk with non-degreed personnel.

For health sciences librarians that still staff a reference desk, doing a study such as this would probably provide some useful information that could result in reference librarians being freed up to engage in the development and delivery of new services while still delivering quality reference service.

Finally, Granfield and Robertson survey users of both reference desk and virtual reference services at two large urban universities in Toronto. The text tells us most of the students live off campus. Their objective was to make "informed decisions about space, services, and resources." The study was carried out in the fall of 2004. Pop up surveys were offered after reference sessions conducted by the universities' collaborative virtual reference service until 100 responses were received. The same questions were distributed in print form at the reference desks in the two libraries. A much higher proportion of virtual reference surveys (106/382) were answered than reference desk surveys (242/9500). A copy of the six-question survey is included as an appendix. Four follow up focus groups were held.

The majority of responses were from undergraduate students. Table 1 says 25 graduate students responded, table 6 says 32 graduate students responded, and in the discussion it says 34. Based on table 1, 16% of the virtual reference surveys were from graduate students, in comparison to only 3.3% of the reference desk surveys. When asked how they preferred to get help in the library, on a scale of 1 to 5, both desk and virtual ref-

erence users rated the reference desk highest (4.4 and 4.3). The library's website was second for both groups (3.8 and 3.5). For the desk users, Google was third, with 3.6. For virtual reference users, virtual reference was third with 3.4. When asked how they preferred to get help when they were off campus, reference desk users preferred to use the library website (4.3); Google was second at 3.9. For virtual reference users, the off campus preference was virtual reference (4.3), followed by the library's website (3.7) and e-mail reference and Google at 3.1 each. Telephone reference was the least preferred, overall.

It appears reference desk users strongly preferred to do research in the library (60.7%) and virtual reference users strongly preferred to do their work off campus (55.4%). Indeed reference desk users visited the library more frequently than did virtual reference users. Only a small number of virtual reference users had never been in the library in the last twelve months, and almost 80% of the them said they had visited one of the libraries at least once a week in the last twelve months. This is actually a slightly higher percent than for reference desk responders who said they had visited the library at least once a week in the last twelve months.

Comparisons between graduate students and undergraduates showed that the 32 graduate respondents (per table 6) were much less tied to the library as a place to do research. When off campus, both undergraduates and graduate students preferred the library website (4.3 and 4.0) as a source of help. Graduate students' second choice was virtual reference (3.3), whereas undergraduates' second choice was Google (3.8). Undergraduates ranked telephone, e-mail, and virtual reference about the same.

In addition to the above noted discrepancies about the number of graduate student respondents, the discussion (p. 50) also seems to contradict table 1 and the accompanying discussion about virtual reference users' second preference for service when in the library.

Taken together, these five descriptive studies remind health sciences librarians who staff traditional reference desks that reference services are changing. Taking into consideration that much of these data are already five years old, it is even more important that we conduct local studies that will enable us to make informed decisions.

THE RESEARCH MENTOR

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The Institutional Review Board (IRB): a Primer

Librarians frequently conduct human subject research. The specific research methods that might use human subjects range from case studies, surveys, interviews, focus groups, Delphi, program evaluation, participant observation, data mining, randomized controlled trials, and cohort studies [1]. If you employ any of these methods and you involve humans, you likely need to read this article.

When first established through the Code of Federal Regulations [2], Institutional Review Boards ("IRBs") were primarily concerned with ensuring that human subjects were not exposed to dangerous or traumatic conditions. Now, IRBs' follow a more broad-based type of mission, and when reviewing minimal risk research, IRBs are primarily concerned with protecting people's privacy and the confidentiality of their data while enrolled in research studies.

Librarians have long shared a concern with protecting

the privacy of their users[3].The most famous recent episodes in our long history of protecting human privacy have involved the FBI Library Awareness program and the US Patriot Act. During the height of the Cold War in the 1960s the FBI began attempting to recruit librarians to report suspicious activities by putative spies [4-6]. The library community first learned about this covert program with a New York Times expose by Robert McFadden in 1987. An investigative report by the The Nation heightened concern among US librarians [7]. As might be expected, librarians opposed the FBI Library Awareness Program based upon both First Amendment and privacy principles [8-9]. In an ironic twist, one that probably escaped the Bureau, the FBI responded to the library community with limited dialogue and instead actually violated the rights of privacy of individual librarians who had challenged the legitimacy of the program [10-11].

Librarians are more familiar with the far more recent controversies surrounding Section 215 of the USA PATRIOT Act. Again, librarians have been concerned by the erosion of library users' rights of privacy [12-14]. Matz has chronicled the many ways that librarians might potentially protect their users privacy rights [15]. These professionals' concerns for undermining individual privacy have extended beyond librarianship into the adjacent information technology realm [16]. Institutional Review Boards (IRBs) similarly seek to protect individuals' rights of privacy during their participation in human subject research. The regulations for human research protections were derived from the basic ethical principles outlined in the Belmont Report [17]. These include respect for persons (autonomy, the right to informed consent), beneficence (do not harm, maximize benefits/minimize risks) and justice (fairness in distribution of research burden). IRBs help ensure that these principles are part of the intrinsic research design.

So, when should you engage the IRB? Two caveats take prominence. First, you must be working with "human subjects," either through direct interaction or intervention with a person (such as administration of a survey or conducting an interview) or by accessing private, identifiable information. Secondly, you must be engaging in "research," a systematic investigation designed to develop or contribute to generalizable knowledge. Many research activities may be considered "exempt" from the regulations (but not from IRB review!) if they fall into one of six well defined categories:

(1) Research conducted in established or commonly accepted educational settings, involving normal educational practices

(2) Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior, unless: (i) information obtained is recorded in such a manner that human subjects can be identified, directly or through identifiers linked to the subjects; and (ii) any disclosure of the human subjects' responses outside the research could reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, or reputation.

(3) Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior that is not exempt under paragraph (b)(2) of this section, if: (i) the human subjects are elected or appointed public officials or candidates for public office; or (ii) federal statute(s) require(s) without exception that the confidentiality of the personally identifiable information will be maintained throughout the research and thereafter.

(4) Research involving the collection or study of existing data, documents, records, pathological specimens, or diagnostic specimens, if these sources are publicly available or if the information is recorded by the investigator in such a manner that subjects cannot be identified, directly or through identifiers linked to the subjects.

(5) Research and demonstration projects which are conducted by or subject to the approval of department or agency heads, and which are designed to study, eval-

uate, or otherwise examine: (i) Public benefit or service programs; (ii) procedures for obtaining benefits or services under those programs; (iii) possible changes in or alternatives to those programs or procedures; or (iv) possible changes in methods or levels of payment for benefits or services under those programs.

(6) Taste and food quality evaluation and consumer acceptance studies, (i) if wholesome foods without additives are consumed or (ii) if a food is consumed that contains a food ingredient at or below the level and for a use found to be safe, or agricultural chemical or environmental contaminant at or below the level found to be safe, by the Food and Drug Administration or approved by the Environmental Protection Agency or the Food Safety and Inspection Service of the U.S. Department of Agriculture.

Other research may meet expedited review criteria, which can be done by an IRB Chair or member in lieu of a fully convened committee.

It is our opinion that it is best practice to develop a collaborative, trusting relationship with your IRB office. Many IRB offices are now staffed by people with national certifications and expert knowledge of the regulations regarding human research protections. IRB staff members are there to help you, not police your work. Finding at least one person with whom you can easily communicate and consult with on new and ongoing projects is very helpful. Also, over time this contact person will become more knowledgeable about the kinds of research conducted by librarians and will thereby offer more targeted, efficient, and appropriate advice. Engaging in open, honest discussions about your activities early in the research project can save you a lot of time and, in some cases, a lot of problems later in the project development.

The UNM Human Research Protections Office has created helpful online tools for researchers such as protocol development guidelines, simplified consent form templates and interactive FAQs at http://hsc.unm.edu/som/research/HRRC/HRRCHomePage.shtml that might interest Hypothesis readers.

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RESEARCH SECTION NEWS

Research Section Proud to Announce 2009 Award Winners

The Research Section of the Medical Library Association encourages MLA members to engage in research activities by sponsoring annual research awards that recognize paper and poster presenters at the MLA Annual Meeting whose work demonstrates high-quality research. The evaluation of the research work is performed by judges based on published criteria.

Thanks to the many preconference and onsite judges who helped us identify these wonderful papers and posters: Irena Bond, Gary Byrd, Rose Campbell, Clista Clanton, Marianne Comegys, Jonathan Eldredge, Jonquil Feldman, Beverly Gresehover, Molly Harris, Mark Hopkins, Rebecca Jerome, Dixie Jones, Taneya Koonce, Elizabeth LaRue, Kathleen McGraw, Misa Mi, Ophelia Morey, Gale Oren, Elaine Powers (sub), Barbara Rapp, Katherine Schilling, Barbara Schloman, Michelle Shipley, Mary Shultz, Catherine Arnott Smith, Priscilla Stephenson, Susan Steelman, Cheryl Suttles, Bette Sydelko, Donghua Tao, Betsy Tonn, Linda Walton, Terrie Wheeler, and Paul Wrynn. We always need more judges. If you are interested, please complete the Award Judge Registration Form at http://research.mlanet.org/awards/.

A $100 cash award is presented for 1st Place for both papers and posters. A $50 cash award is presented for 2nd Place for both papers and posters, and a $25 cash award is presented for Honorable Mention. The highest quality research poster or paper presented by a hospital librarian at the annual meeting also receives a $100 cash award.

Contributed Papers

1st Place:

Authors: **Thomas Singarell**a, Professor and Director, Health Sciences Library and Biocommunications Center, University of Tennessee Health Science Center, Memphis, TN; **Paul Schoening**, Associate Dean and Director, The Becker Medical Library, Washington University School of Medicine, St. Louis, MO

Title: **Trends in Institutional Repositories in Health Sciences Libraries**

Section Program: **Research Fusion: Integrating Evidence-based Library and Information Practice into the Librarian's Work Life**

Objectives: What are the trends for institutional repository (IR) development in academic health sciences libraries over the past four years? What has worked and what hasn't as medical libraries participate in IRs? What are the challenges?

Methods: Trends are analyzed in IR development in health sciences libraries (HSLs) by comparing surveys that were distributed in 2005, 2006, 2007, and 2008. The subject group is the Association of Academic Health Sciences Libraries (AAHSL) membership consisting of >114 libraries serving accredited US and Canadian medical schools belonging to the Association of American Medical Colleges. The survey instrument was distributed to the entire AAHSL membership.

Eight questions included demographic information, IR ownership, kinds of content, length of IR, unique digital objects, percentage of faculty contributing, document management software, technical support, plus comments. Descriptive statistics for each survey category were compiled, including both whole numbers and percentages. A side-by-side comparison between the survey years is presented to illustrate results, observations, and conclusions.

Results: A good response rate (>50%) of library directors completed the survey. Results indicate a slowly increasing effort as HSLs establish IRs, and more plan to do so. Many HSLs are actively involved with IRs on their campus but are early in the development process. Virtually all respondents indicated that few (<10%) of their campus faculty contributed articles to the IR. Bepress and DSpace are the dominant document management software tools used. Additional resources are needed to adequately support the HSL in developing an IR, and most often the impetus is to protect the archives, publications, and research of the institution. The most successful large IR efforts appear to be via the main campus medical library and statewide efforts. Comments are varied and indicate concerns with IR development. Several conclusions will be offered, and comments will be discussed.

2nd Place:

Author: **Nakia J. Carter**, AHIP, Clinical Reference Librarian; **Rick Wallace**, AHIP, Associate Director; **Kefeng (Maylene) Qiu**, AHIP, Clinical Reference Librarian; Quillen College of Medicine Library; East Tennessee State University, Johnson City, TN

Title: **Blending Phone Contacts and Site Visits to Promote Rural Outreach Services: A Randomized Controlled Trial to Assess Usage**

Section Program: **Research Fusion: Integrating Evidence-based Library and Information Practice into the Librarian's Work Life**

Objective: The East Tennessee State University Quillen College of Medicine Library (ETSUQCOML) wanted to determine if the introduction of phone calls to an existing outreach visit increased the usage of the ETSUQCOML's services.

Methods: Eight hospitals and sixteen clinics were chosen to participate. Two site visits were made a month to each participating institution. A total of two phone calls and two emails a month were given to multiple contacts in the hospital or clinic. The hospitals and clinics were randomized to determine which received the phone call intervention. Interlibrary loan statistics and reference search statistics were then analyzed to determine if there was a statistically significant difference. The data were also analyzed to determine if the intervention was more successful in hospitals or clinics.

Results: Librarians learned to what degree email and phone calls could be substituted for personal visits in an outreach service as a means of maintaining it and not experiencing a decline in service requests.

Conclusions: In today's economic times, it is important to maintain services to underserved health care providers but to do it in the most cost effective manner. This study has provided helpful data as to the possibility of substituting less expensive contacts such as emails or phone calls for more expensive ones such as face-to-face visits in order to sustain an outreach service. The authors are looking to extend this project to multiple end-points such as six months, nine months, and one year to determine sustainability.

Honorable Mention:

Author: **Sabrina Kurtz-Rossi**, Project Coordinator, Health Information Literacy Research Project, Medical Library Association/SKR Consulting, Medford, MA; **Andrea Harrow**, Medical Librarian, Good Samaritan Hospital Medical Library, Good Samaritan Hospital, Los Angeles, CA; Kim Hart, Medical Librarian, Billings Clinic Medical Library, Billings Clinic, Billings, MT; **Holly Sheldon Kimborowicz**, AHIP, Health Science Librarian; Lake Hospital System Medical Li-

brary, Lake Hospital System, Painesville, OH

Title: **Unexpected Outcomes of the Health Information Literacy Research Project**

Section Program: **Fusing Culture and Community to Improve Health Literacy**

Objectives: To evaluate the MLA Health Information Literacy Curriculum offered by medical librarians to health care providers. This paper will describe pilot site librarians' experiences and lessons learned drawing from quantitative and qualitative evaluation methods. Of particular interest are the unexpected outcomes of increased involvement in cultural competence work among participating librarians and newfound medical and public librarian collaboration.

Methods: The MLA Health Information Literacy Curriculum, developed by MLA with funding from the National Library of Medicine (NLM), was designed to increase awareness of health literacy barriers to quality patient care, increase use of NLM resources such as MedlinePlus and Information Rx, and promote the role of librarians as key providers of health information literacy resources and support. Nine hospital-based libraries piloted the curriculum over a four-month period, April-July 2008. A wide range of health care providers including physicians, nurses, social workers, pharmacists, and others attended in the curriculum. Attendees completed a pre-/post-session evaluation and follow-up survey to assess increases in knowledge and intention to act. Librarians completed monthly story-based Information Rx tracking reports and a semi-structured final report to provide formative feedback and offer guidance to librarians interested in using the curriculum in the future.

Results: Pilot site librarians conducted 67 sessions, reaching 1,114 health care providers. In pre-/post-session evaluations (n=912), 86% of respondents said the curriculum increased their knowledge of health literacy; 91% said they intended to use MedlinePlus as a result of participating in the session; and 47% said they intended to refer patients to the library for information and support. In response to the follow-up survey (n=183), 81% said they would continue to consult their librarian regarding health literacy issues. Librarians reported increased visibility as an important outcome. One site was recognized for promoting patient safety and patient-provider communication. Three sites were acknowledged for supporting cultural and linguistic competence by offering easy-to-read, multilingual health information. Community outreach was common. In one case, the medical library partnered with the public library to promote and respond to Information Rx. The MLA Health Information Literacy Curriculum was revised based on librarian feedback and is available via MLANET (www.mlanet.org/resources/healthlit/).

Hospital Librarian Research Award (Paper):

Author: **Diane G. Schwartz**, AHIP, FMLA, Director, Libraries, A. H. Aaron Health Sciences Library, Kaleida Health, Buffalo, NY

Title: **The Internet, I-Fusions: Synergy Between Reliability, Education, and Clinical Practice for Emergency Medicine Residents**

Section Program: **Educational Fusion: Librarian-Integrated Instruction in Interdisciplinary Education Programs and Partnerships**

Objective: To determine if emergency medicine residents (EMRs) working in a teaching hospital can accurately answer clinical questions using only Internet resources.

Methods: Emergency department residents perceive Internet resources as up to date and reliable. When answers to clinical questions are needed, residents search the Internet rather than textbooks. To determine the accuracy of clinical information from the Internet, faculty created and validated seventy-one emergency medicine questions. Residents were given a paper and pencil pretest and instructed to answer the questions without outside resources and to answer only if they were confident of the accuracy of their answers. Ques-

tions that the residents were unsure of or answered incorrectly were administered again in the controlled environment of a library computer laboratory. Residents were instructed to search only Google and resulting web resources to answer the questions. Each resident's search history was captured using USA Proxy software. Search logs are being analyzed to understand search strategies and to learn which resources were used. This is a single blinded prospective study. Participation was voluntary and confidential, and their performance will not affect their academic standing.

NOTE: No results or conclusions reported online.*

Posters

1st Place (Poster 102):

Authors: **Susan C. Steelman**, Coordinator, Research and Clinical Search Services; **Brynn Mays**, Reference Librarian; UAMS Library; University of Arkansas for Medical Sciences, Little Rock, AR

Title: **Fusing Work and Life: A Study of US Health Sciences Libraries' Flexible Work Environments**

Objective: To describe the current work-life issues facing librarians and paraprofessionals in health sciences libraries today. To determine which types of flexible work arrangements are being used and which are most in demand. To identify positive and negative outcomes of flexible work environments.

Methods: This is a descriptive study utilizing an electronic questionnaire that will be distributed to health sciences librarians and paraprofessionals in the United States. Recruitment messages will be sent to Association of Academic Health Sciences Libraries directors and MEDLIB-L, with a request for it to be forwarded to appropriate regional email lists. Access to the questionnaire will be through a single generic user ID. All responses will be anonymous, and no personal identifying information will be collected. The questionnaire will include categories for demographics, workplace characteristics, respondents' use of flexible work arrangements, and perceived impact on the library.
NOTE: No results or conclusions reported online.*

2nd Place (Poster 150):

Authors: **Mary Jo Dorsey**, AHIP, Faculty Librarian, Health Sciences Library System; **Ellen G. Detlefsen**, Associate Professor, School of Information Sciences; University of Pittsburgh, Pittsburgh, PA

Title: **Primary Care Physicians' Consumer Health Information-seeking Behaviors: A Model for Working with Elderly Depressed Patients and Their Caregivers**

Objective: Physicians' clinical information-seeking behaviors have been a major target of investigation among the library and information science (LIS), information science (IS), and biomedical informatics professions for the past twenty or more years. Practicing evidence-based medicine (EBM) has become an expected standard in current health care with EBM curricula incorporated with the didactics in medical school education. This project focuses on the point where EBM integrates with the delivery of information to the senior patient in a way that is meaningful to the patient. This study investigates the information-seeking behaviors that seniors' primary care physicians exhibit in order to educate themselves about current consumer health information (reading materials, websites, news, educational narratives) and how they currently disseminate educational information to patients and their caregivers.

Methods: A grounded theory framework was conceived to administer a multimodal method of data collection. Primary care physicians who see elderly patients primarily in a large urban academic setting were recruited to participate in semi-structured interviews, a self-evaluative confidence scale, and an environmental office scan.

Results: The physician consumer health information (CHI)-seeking model indicates there is a pattern by which physicians generally seek information at a consumer level for their senior patients and caregivers.

The model can be replicated with varying demographics and populations in order to indicate a clearer flow of health information exchange between a physician and a special population.

Conclusions: While the model is geared toward a specific homogeneous group of physicians, it is clear that a model can be useful in furthering physician/medical student education and training with regard to their treating and relating to their special populations.

Honorable Mention (Poster 176):

Authors: **Amy Donahue**, Associate Fellow; **Beth Weston**, Head, Serial Records Section; National Library of Medicine, Bethesda, MD

Title: **What Happens When MEDLINE Journals Move from Print to Electronic Only?**

Objective: A look at the archival status of MEDLINE journals that have made the switch as of October 2008, the National Library of Medicine (NLM) Serial Records Section identified 220 titles that ceased in print and are now electronic only; 56 are currently indexed in MEDLINE. NLM's policy states that before an electronic-only journal can be indexed in MEDLINE, the publisher must demonstrate that the articles are being submitted to a digital archive (only PubMed Central is currently accepted). Print MEDLINE journals that move to electronic-only circumvent this requirement without necessarily being aware of it. This project will look at the archival status of the MEDLINE titles and provide data to assist NLM in developing a new policy for MEDLINE titles that cease in print.

Methods: The fifty-six MEDLINE titles were first checked against the titles found in PubMed Central. Next, the titles were checked against the holdings in Portico. The third step was to determine if any of the titles were included in LOCKSS. Finally, research was done to see if the content could be located on publisher's websites.

Results: The resulting data (including information on incomplete content, problematic websites, etc.) were entered into an Access database. Seventeen (30%) of the 56 titles were archived in PubMed Central (15 of these titles were also found in LOCKSS), and 4 titles (7%) were found in Portico. The remaining 35 titles (63%) were not archived in a location considered a viable repository. Although some publishers' websites provided access to journal content (often incomplete and/or subscription only), this does not constitute an archive according to NLM's definition. In addition, websites were found that were down or going to be taken down in the near future, revealing that information has already been or soon will be lost.

Conclusions: This investigation indicates that the archival status of these MEDLINE journals is far from ideal. Examples were found of information lost when publisher support disappeared. The risk is high for continued loss, if archiving is not guaranteed. NLM must take action and follow up to ensure that publishers comply with NLM's policy for MEDLINE journals.

Honorable Mention (International Poster 5):

Authors: **Yukiko Sakai**, Associate Manager/Doctoral Student, Shinanomachi Media Center, Kitasato Memorial Medical Library; **Chihiro Kunimoto**, Doctoral Student/Research Assistant, School of Library and Information Science; **Keiko Kurata**, Professor; Faculty of Letters, Keio University, Tokyo, , Japan

Title: **How They "Change": Health Information Consumers in Japan**

Objective: The purpose of this study is to investigate both the health care consumers' needs for information and their information-seeking behavior in Japan. We then compare these results with the results of similar surveys administered in Japan in 2000 and 2001 and in the United States in 2006.

Methods: We administered a questionnaire to approximately 1,200 individuals in Japan between the ages of 15 and 79 in a randomized, population-based, door-to-door survey. We selected the respondents by

using a commercial survey service that created a demographic sample based on residential region, city size, gender, and age. We administered a survey consisting of 7 questions relating to their experiences with health information seeking and the details of that experience. We included questions about health topics, information sources, effects of the information on respondents' emotions and behavior, and willingness of the respondents to read clinical articles published in academic or professional journals. We present the preliminary results below. We will follow up these results with ongoing further analysis that will be presented at the poster session.

Results: Our preliminary results indicated that slightly more than half (51.9%) of the participants had experience seeking health information during the last 2 years. Our analysis found that most seekers searched for information on a "specific disease" (77.0%). The results showed that "asking physicians" (53.6%) is still respondents' first choice as an information source, while the "Internet" (42.8%) gained greater popularity as a resource compared to the results of the earlier Japanese survey from 2000 (10%). Unexpectedly, half of the participants responded that they were willing to read clinical articles when they are written in the Japanese language (48.9%).

Conclusions: The evidence indicates that Japanese health care consumers are seeking health information in a proactive manner and in greater numbers than in previous years. These consumers feel empowered by the information they have accessed and would like to read clinical research in their native language.

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*The screening criteria for awards were revised and published on the Research Section website on April 7, 2009. Since this was after the cutoff date for 2009 abstracts to be revised on the MLA abstract submission website, we decided to allow papers and posters to be considered for this year's awards even if they did not update the online abstract to add "results" and "conclusions."

Submitted by Kristine Alpi and Ruth Fenske

Book Review Column Anyone?

In an ongoing effort to keep Hypothesis fresh and new we thought we would propose a book review column. We were thinking that if we chose research oriented books, either about doing research or reporting on research in appropriate fields that reviewers would then review the work in terms of how they did the research and drew their conclusions, and the result would be of interest to the readership. So, if you are interested in seeing a column like this and/or interested in contributing to the column then just let us know. Lisa has offered to be responsible for requesting the books from publishers and sending them to reviewers.

If you have another idea for a column or feature for *Hypothesis* please let your editors know!

What would you like to see here?

Have an idea for Hypothesis?

Please let your editors know!
We want to hear from you.

Lisa (lennis@uab.edu) and
Kathel (kathel.dunn@gmail.com)

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