

AALL Research Fund: An Endowment Established by LEXIS -- NEXIS

Application Cover Sheet

1 -- Date Submitted: March 30, 2006

2 -- Project Title: Bibliography and Essay on Cognitive Science and Linguistics for Law Librarians.

3 -- Primary Contact: Charles R. Dyer

4 -- Address: 808 East Maple Street, Bellingham, WA 98225.

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6 -- Fax: 360-738-6439 (call first).

7 -- Email: charlesrdyer@clearwire.net

8 -- Project Host, if applicable (i.e. Organization, Library or Consortium): Retired law librarian doing independent research. I might become a scholar in residence at the University of Washington, Seattle, as a result of this grant, either at the Law School or the School of Information.

9 -- Address: See 8.

10 -- Telephone: See 8.

11 -- Please attach the following:

- a. Personal Resume(s);
- b. Abstract of Proposed Research Project (one page or less);
- c. Timeline, in graphic form, with tasks and estimated completion dates;
- d. Proposed budget, specifying all sources of funding and a detailed description of how funds will be spent.
- e. Signed certification form (attached) indicating acceptance of the terms of the AALL Research Grant program and the willingness to abide by them.

Certification

By submitting this proposal, I accept and will abide by the terms of the AALL Research Grants program. I understand that, if awarded an AALL Research Grant, I must finish the research project within the agreed-upon time period and file progress reports as described in the Reporting Guidelines. I further understand that my failure to adhere to the terms of the Research Grants program may result in no further disbursement of funds and/or the reimbursement to AALL of monies awarded, as determined by the AALL Research Committee.

Signature of Grant Applicant

Date

Bibliography and Essay on Cognitive Science and Linguistics for Law Librarians. AALL Research Grant Proposal

Charles R. Dyer

Discoveries in the last 30 years in cognitive linguistics have correlated with discoveries in the last 15 years in neuroscience and cognitive science in surprising ways, leading to a completely new way of understanding human memory, conceptualization skills, and categorization and reasoning processes. While creating a revolution in such areas as cognitive psychology and studies in artificial intelligence, these discoveries have been taken up by only a small minority of legal scholars and information scientists to date. Recent popularization of these new theories in the press and media may change that. If not actually creating a paradigm shift in our understanding of logical processes, these new theories will definitely play a much larger role in analyzing law and in usability studies. Law librarians need to understand these new theories.

I recently retired from my position as the director of the San Diego County Public Law Library in order to pursue scholarly writing. My specific interest is the disconnect that self-represented litigants have when trying to understand how law works. Noting that they don't "think like lawyers," I am studying how they do think. (I recently submitted a paper, available on request, to the AALL Call for Papers taking a first stab at this.) The Lakoff-Johnson cognitive theory of metaphor, the Edelman studies in cognitive science, and similar work have greatly aided that understanding. These theories can also be used by librarians and others who train law students and new law firm associates, so I will address that as well.

With the proceeds from this grant, I propose to create an extensive annotated bibliography from the several disciplines that have developed the discoveries and theories thus far, to create a glossary of terms as used across these fields, and to create a comprehensive essay that will act as an introduction for law librarians to the several fields. The essay (or a shortened version) will also serve as a quick learning tool to the basic concepts for law librarians, so they can employ some of the insights in their work (e.g., the dominant role of base-level metaphors in learning and memory). I also intend to include materials from related disciplines and popular sources that do not refer to the theories, but which provide background information and related ideas. While an initial publication in *Law Library Journal* would be useful, I foresee eventual publication as a website and, hopefully, continuation of the project, as well.

As an independent researcher, I have attendant research costs. Many books will need to be purchased for review and assessment. Many articles will need to be obtained. I will need to subscribe to some databases (e.g., ACM) that I cannot reach through local libraries and to pay for the download of certain articles, e.g., from Science Direct. Depending on cost advantages, I may choose to be a scholar in residence (most likely at the University of Washington, Seattle). There can be cost advantages by joining certain organizations as well, e.g., the Association for the Scientific Study of Consciousness (ASSC). I plan also to attract several law librarians from academia and elsewhere to the project. My work and that of my colleagues would be volunteer. Since I am the researcher with the most time, I will be the main project worker and compiler. All costs would be for necessary access rights or purchases or production costs. No base costs (e.g., computer use, etc.) would be included. I may attend or send others to a few important conferences. (Cynthia Fellows is planning to attend the ASSC Conference in Oxford, UK, in June for this project.)

Disclosure: I wish to retain the copyright to the bibliography and the other works. I am willing to negotiate with AALL regarding any remuneration that may come from the works funded by this grant. I (or my fellow researchers) would retain title to any purchased books and materials. I also plan to use my work in compiling the bibliography as background preparation for writing a series of articles and possibly a book in my related research topics. Thus, I plan to read the accumulated research more thoroughly than a normal bibliographer. I also may do some consulting to court systems and law libraries and employ the knowledge I gained from this work. (Please note that the grant will not aid me in obtaining tenure or any other increased compensation at any institution. My overall monetary gains will be less than most researchers.)

**Bibliography and Essay on Cognitive Science and Linguistics for Law Librarians.
AALL Research Grant Proposal**

Charles R. Dyer

Time Line

Date	Task	Assignee
Start	Create initial outline of areas to be covered. Gather team. (Team will be created by volunteers via email. An aim is to meet at the 2006 AALL Meeting.)	Dyer
	Arrange for access to needed databases.	Dyer, others
	Create bibliographic entries for books and materials already seen and read.	Dyer
	Create initial outline of essay.	Dyer
	Set up ledger and materials and costs log.	Dyer
2 nd month	Set out assignments.	Dyer
	Purchase obvious items.	Dyer, others
	Create review process.	Dyer, others
	Start reading new materials.	Dyer, others
	Maintain ledger.	Dyer
3 rd month	Gather and read.	Dyer, others
	Determine what can be listed without full reading and what should be reviewed fully.	Dyer, others
	Create levels of works: essential, on point, tangential, etc.	Dyer, others
	Maintain ledger.	Dyer
	Begin work on website.	Dyer or other.
4 th month	Check on progress from volunteers. Make re-assignments as necessary.	Dyer
	Gather and read.	Dyer, others
	Collect such data as prepared.	Dyer
	Take initial stock of areas covered and where the citations lead. Add such areas as needed. Reform outlines.	Dyer, others

Date	Task	Assignee
	Draft some parts of the essay.	Dyer
	Maintain ledger.	Dyer
5 th month	Gather and read.	Dyer, others
	Preliminary reports from volunteers.	Others
	Maintain ledger.	Dyer
6 th month	Mid-year assessment and report for AALL Research Committee.	Dyer
	Mid-year financial statement.	Dyer
	Gather and read.	Dyer, others
	Initial printout and posting of bibliography on website (private access).	Dyer or other.
7 th month	Gather and read.	Dyer, others
	Maintain ledger.	Dyer
8 th month	Complete bibliography.	Dyer
	Review through volunteers. (Dyer sends it out.)	Others review.
	Review through outside reviewers. (Dyer sends it out.)	Others review.
	Maintain ledger.	Dyer
9 th month	Complete comprehensive essay.	Dyer
	Review through volunteers. (Dyer sends it out.)	Others review.
	Review through outside reviewers. (Dyer sends it out.)	Others review.
	Maintain ledger.	Dyer
10 th month	Revise bibliography and essay as commented.	Dyer
	Maintain ledger.	Dyer
11 th month	Finalize bibliography.	Dyer
	Finalize comprehensive essay.	Dyer
	Final financial statement.	Dyer
12 th month	Submit materials to AALL Research Committee.	Dyer

Date	Task	Assignee
13 th month	Arrange publishing (Law Library Journal and/or website).	Dyer
14 th month	Advertise presence of materials.	Dyer, others

Notes:

1. Depending on the start date of the project, there may be a gap created by attendance at the American Association of Law Libraries meeting. The workload will be shifted, but report deadlines will be maintained.
2. Attendance at other conferences may be included as part of the project. They will not interfere with the time line. Mr. Dyer will attend meetings that are convenient to already scheduled travel. Other researchers may attend meetings that are near them. Cynthia Fellows is prepared to attend the Association for the Scientific Study of Consciousness Conference in Oxford, UK, July 23-26, 2006.

**Bibliography and Essay on Cognitive Science and Linguistics for Law Librarians.
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Proposed Budget

The following expenses are not given in specific monetary detail because much of the determination as to how to obtain materials will be made during the research effort. Instead, the rules for acquisition are set forth so as to contain costs and not waste funds. A specific accounting of each purchase will be kept and reported. No base equipment costs or administrative costs are included. Consumables will be determined at a set rate, according to standard scales. Any unused funds will be returned to AALL. Any funds spent that, upon review by AALL, are seen as inappropriate, will be returned as well. Since Mr. Dyer will have to cover any such expenses personally, he will maintain a close watch on them.

The expenses listed here are estimates. The researchers reserve the right to increase or decrease any line as necessary. It is the nature of preparing a well-annotated bibliography and comprehensive essay that not all the purchases necessary can be anticipated up front, as the research will lead wherever it leads. As in purchasing materials for a library, the amount given can be expended, regardless of amount, but in this instance, the budget is a reflection of what is believed can be accomplished within the time frame, with what is believed to be a fair balance between the competing needs.

Expense for Research \$3,000

Book Purchases: Generally, books will be reviewed prior to purchase, either by checking them out at a library or by examining reviews in the literature. Only those books found to be essential in some way, thus requiring close reading and citing that cannot be done through library research, will be purchased. There are a core of books in each of the examined fields that are cited as landmark texts. There are some books that will be useful in other ways, such as general textbooks that summarize the current state of research findings and theories, which will be useful in writing the essays and articles. Some more popular literature will also be purchased in order to be used to draw connections to the more in-depth treatments.

Article Purchases: Most articles will be obtained in the cheapest form available. Many are available free, except for printing. Generally, articles will be obtained when they are the most recent in the field or are cited often by other authors. Lines of research and discussion will be followed. Note: Mr. Dyer has a personal subscription to Hein Online already. Several of the other researchers will be able to obtain articles through their own academic connections. The researchers will make every attempt to utilize the best method,

Access to Articles: For some articles, access rights will need to be purchased, e.g., the ACM database, if not otherwise available.

Memberships: Membership in certain learned societies will result in reduced costs for book and article purchase, enough to more than pay for the memberships. Also, some of these memberships will enable a reduced rate for certain meeting registration fees.

Possible Expense as a Scholar in Residence: Depending on the extent to which Mr. Dyer can obtain access to certain databases and materials through others, he will decide whether he may be able to save expense or significant time by becoming a scholar in residence, most likely at the University of Washington in Seattle.

Expense for Attending Professional Conferences \$1,800

Part of the research plan includes observing and reporting on relevant conferences in the fields being studied. However, since attendance at conferences can be inordinately consumptive, this will be done only within affordable boundaries. Some important conferences will be skipped. If a researcher can attend a conference close by and avoid significant travel expenses, then the aim will be to cover the out of pocket expense. Generally, Cynthia Fellows will cover Europe; Pamela Gregory will cover the East Coast, particularly the DC area, Fred Barnhart will cover Chicago, and Charles Dyer will cover the West Coast. All such work should occur within the grant period, with the possible exception that we would like Cynthia Fellows to cover a meeting of the Association for the Scientific Study of Consciousness, June 23-26, 2006, in Oxford, UK, which may be in advance of the grant period.

Generally, most expense will be for registration fees. Travel costs and lodging will be kept to a minimum, as there simply is not much to work with. Mr. Dyer plans to link any West Coast travel with personal trips or to absorb much of the travel expense.

Expense for Reproduction and Mailing \$200

Generally, communication will be by email between the researchers, as will be the transfer of research materials in computer format, e.g., most articles. Books obtained by one researcher and mailed to another will be covered, but usually as inexpensively as possible.

Work on a possible website will be done as inexpensively as possible. This grant does not include any expense for maintaining a website. Mr. Dyer already has software capable of creating PDFs or changing PDFs into word processing formats. That will either be done by Mr. Dyer, by a participating institution after the creation, or by an SIS.

In accordance with the rules for the grant, hard copies will be submitted as required to AALL.

TOTAL \$5,000

**Bibliography and Essay on Cognitive Science and Linguistics for Law Librarians.
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Project Participants

As the project manager, main compiler of the proposed bibliography, and author of the proposed essay, Charles R. Dyer will carry the brunt of the workload. Mr. Dyer is an independent scholar who plans to spend an average of 30 hours a week or more on the project. Mr. Dyer's résumé and attendant materials are enclosed.

If the grant is approved, Mr. Dyer will send a call out to other law librarians who may wish to participate in gathering materials for the bibliography or in the review process. Currently, Mr. Dyer is in communication with several law librarians with regard to participation in the project. Not all have committed yet, as there is a substantial amount of required reading (several books) for anyone wishing to participate as a researcher.

Currently, three law librarians have signed on as researchers:

1. Fred Barnhart, Associate Director, Loyola University Chicago School of Law Library, whose résumé and attendant materials are enclosed. Mr. Barnhart has worked with Mr. Dyer on previous research for about three years.
2. Cynthia Fellows, recently retired Director of the Alaska State Law Library System, and currently Associate Research Fellow at the Institute of Advanced Legal Studies, London, goes back and forth between London and Oxford, where her significant other is a research fellow. Ms. Fellows is working on a research project involving the U.S. Supreme Court output over a 100 year period (project of an Oxford political science professor) and doing a usability study for BAILII. As she only recently signed on, she prepared a one-page résumé in time for the application.
3. Pamela J. Gregory, Director, Emerita, Prince George's County Law Library, Retired. Ms. Gregory is on the Board of Maryland Legal Assistance Network, working in Outreach and Development. As she only recently signed on, she prepared a one-page résumé in time for the application.

Reviewers should be easier to obtain, as Mr. Dyer already has a list of librarians and others who have been willing to review his previous writing. Among them will be:

1. Carmen Brigandi Jahns, Head of Acquisitions and Serials Control, California Western School of Law, and her husband, Gary Jahns. Ms. Jahns is Mr. Dyer's very good friend of many years. Her husband is a physicist who builds computer models of neural nets for artificial intelligence systems. They are conversant with the science.

[Note: Résumés are not included on the Public PDF version of the grant application.]

**Bibliography and Essay on Cognitive Science and Linguistics for Law Librarians.
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Addendum: Revision Due to Partial Funding
May 26, 2006

After being notified by the AALL Research Committee that they have approved \$1,666 as a grant for the project, rather than the \$5,000 requested, I have decided to make the following revisions:

1. Partly based on a two-hour conversation I had with Professor Mark Johnson (one of the creators of the cognitive theory of metaphor), we will be much more selective about the conferences to which we will send representatives. According to him, most of the conferences that really include substantial discussion of the cognitive theory of metaphor and developments in cognitive linguistics are special conferences. The standing annual conferences of professional associations still continue programs based on more traditional theories, with only a few devoting some space to these developments. Cynthia Fellow will attend the Association for the Scientific Study of Consciousness (ASSC) Conference in June 2006, which is one of the better ones, with membership and registration paid by the grant. (Her membership will also get us discounts on pertinent materials.) Using my own funds, I will attend the Cognitive Science Society, Vancouver, BC, August 2006, the ASSIST Conference, Seattle, WA, January 2007, and possibly the ALISE Conference, Austin, TX, November 2006. The latter two are probably not going to be pertinent to the project to any great extent. There are a couple of linguistics conferences that I may decide about later. So most, or all, of the remaining funding will go toward gathering and reviewing materials.

2. We will now presume that we do not have the ability to be comprehensive, so we must create a strategic priority in searching for the relevant materials. In order for the outcome to be as beneficial as possible for law librarians, we will limit the scope as noted below:

a. We will cover the developments in the cognitive theory of metaphor among writings in cognitive linguistics and cognitive psychology. We will exclude, or not emphasize, clinical psychology. We will concentrate on books, with more of an overview of the journal literature i.e., which journals routinely cover the theories. We will include articles that are noted by books as being of a landmark nature and any articles that seem especially pertinent to law library work or information science. And we will include ways to access the rest of the literature so that law librarians serving other researchers will have a starting point.

b. We will cover cognitive science, connectionism and artificial intelligence, and neuroscience with an emphasis on books written for the general public or as introductory materials. Books written for the scientists and journal literature will be covered only as referred to by the general public and introductory books. We will also include ways to access the rest of the literature for law librarians. In Europe, there has been an active discussion of artificial intelligence and connectionism as it relates to law. That will be examined closer to see if the use of the new theories has impacted that discussion. Generally, this is the area where we will save

the most money because we simply will not dig as deep. (At the end of the grant or part way through, we can assess whether to pursue an additional grant to dig deeper.)

c. We will cover legal scholarly writings in the following fashion: Major books employing the cognitive theory of metaphor will be included. Law journal articles that employ the cognitive theory of metaphor and are instructive to law library work will be included. An examination of the scholars who use the cognitive theory of metaphor will be made. (I have contacted Professor Stephen Winter, who is the foremost legal scholar on the cognitive theory of metaphor. He plans to call me when he returns from Europe.) We shall presume that law librarians are capable of obtaining legal literature generally, so we shall not be reviewing every use of the theories. For purposes of the comprehensive essay, we may include some works that do not mention the cognitive theory of metaphor as examples of other patterns of thought, e.g., the prevailing legal positivist theory as used by the judiciary, but I will forgo my plans to be more comprehensive in these materials. That will save money and time.

d. We will cover information science writings that specifically refer to the cognitive theory of metaphor, both books and journal articles. That will limit our examination of this field dramatically. My very cursory example study (thanks to Fred Barnhart) shows that about one in five journal articles on the “philosophy of information” are useful in that regard. We may wish to return to this area with future funding to examine those other articles that seem to have similar attributes but do not specifically use the theory.

e. The research in philosophy will be similarly limited as with information science, i.e., limited to works specifically on experientialism, connectionism, and similar theories, except that some examination of recent major works in epistemology and the foundationalist-anti-foundationalist debate will be covered.

f. The landmark work of past scientists and philosophers that are considered as precursors of the current theories will be examined only in a limited fashion, i.e., by a review of the major books that are cited by our other major sources. Further study of the work will have to wait to see if we can get further funding. I am referring to a very diverse set of writers, such as Eleanor Rosch, Thomas Kuhn, Maurice Merleau-Ponty, John Dewey, etc., all of whom have been studied at length by others. Many of those are already mentioned in the list of references in Lakoff and Johnson’s *Philosophy in the Flesh*, so we will cover those for sure. But they mention Merleau-Ponty’s *Phenomenology of Perception*, but don’t mention *Signs*, which is also important, but their list was not meant to be exhaustive.

g. As to my hope to include pertinent literature from the popular media, I believe we should just let that list of works develop as we go along. Much of the popular literature does not mention the cognitive theory of metaphor or connectionism, etc., but definitely alludes to the issues those theories bring to us. I am referring to such diverse works as those of Leonard Shlain, Temple Grandin, Louis Menand’s *The Metaphysical Club*, and the two *What The Bleep Do We Know* movies. (I have yet to look at Steven Pinker’s *The Blank Slate* and have barely gotten into Malcolm Gladwell’s *Blink*.) I think the problem here is that the stuff is coming out faster than any one person can keep up. Fortunately, this portion of the work is probably not too expensive, as we can actually borrow much of the literature.

3. The New Plan. The original time table was good at deadlines and short on specifics about the hunt. That was because I had originally intended a scatter-shot approach, using a larger committee and good reporting mechanisms to avoid duplication of effort, except when we wanted it. Now, we shall maintain the deadlines, but we will examine the work in the order noted above. I will assign chores to the team in a much narrower way. We will lose some of the comprehensiveness that can be obtained through serendipitous discovery.
4. The essay, which some of my outside reviewers found to be the more important part, may not be as comprehensive, but we will certainly be thorough enough for it to be accurate. The bibliography will be shorter, but more precise. We will also simply direct law librarians as to useful sources that they can then explore on their own.
5. I am forgoing the idea of setting myself up as a Visiting Scholar in order to save money. That was to be done in order to gain more access. Instead I will endeavor to recruit to the team one or two additional academic law librarians, hopefully from institutions with very good access to a wide variety of scientific databases.
6. I will cover any reproduction costs from my own funds.
7. The original intent was to have sufficient funds to go wherever the journey took us, just watching our money along the way. I had presumed that we would probably not use all the funds and would then return the unused portion. Now, we will seek to reach specific destinations and budget them out. I suspect (hope) that some of the incidental charges may get covered by the institutions of some of the team members (especially if they have flat-rate contracts), for which I would have given a reimbursement. So our final report will include detail of institutional support as it occurs.
8. There is the slim possibility that I can obtain some additional non-AALL funds, at which time I will figure out how that may help. If it happens, the additional grant funding would most likely be for a directed project at a specific site, e.g., a pilot project at a law library, and some overhead funds might be used to aid this effort. There is nothing in the pipeline at the moment, but I have some connections through the Self-Represented Litigation Network who have discussed this other venture.