Transformational Times:

An Environmental Scan Prepared for the ARL Strategic Plan Review Task Force

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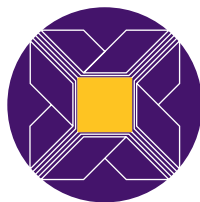**Crit Stuart,** Director, Research, Teaching & Learning

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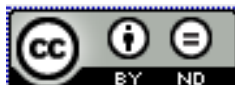
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Contents

Introduction

In 2009 the Association of Research Libraries is renewing its strategic plan. The plan that will result from this effort will guide the Association in setting priorities and organizing its activities for the next several years, a time that is expected to present unprecedented challenges and concomitant opportunities to research libraries. To support the work of the Strategic Planning Task Force, ARL senior staff have initiated an environmental scanning exercise to identify trends that are likely to affect research libraries and the work of the Association. The report considers not only challenges, but also opportunities.

In engaging in the scan, ARL staff finds that these trends can be most clearly organized using the existing strategic arenas for ARL action. For each section corresponding to the three strategic directions, high-level trends are identified and further details are provided for each. Below, some general observations are offered in the form of a short list of overarching themes and challenges, followed by the concise lists of trends. The document concludes with a brief discussion of how ARL's capabilities can relate to these emerging opportunities and expressed member needs and some closing observations on resource issues.

Above all, ARL and its member libraries must have a "bias for action and collaboration." Only by doing so can we advance the mission of research libraries in these "transformational times."

Common Themes

The established broad strategic directions remain an effective framework for considering trends, opportunities, and challenges to research libraries and for the Association. Each strategic arena functions with partial dependence on the others and more general trends. In looking across the key trends that are described below, some common threads recur.

- Libraries need to change their practices for managing traditional content and develop new capabilities for dealing with digital materials of all types, but especially new forms of scholarship, teaching and learning resources, special collections (particularly hidden collections), and research data.
- Content industries inevitably seek to extend control over the copyright regime and over content, in general, while libraries, authors, and research institutions endeavor to provide more access to and active management of the intellectual assets produced by the academy.
- Accountability and assessment are essential for data-driven decision making within libraries, on campus, and with funders and policy makers.
- Collaborative approaches are being applied to new activities both with regard to traditional operations as well as emerging functions.

- Radical reconfiguration of research library organizations and services is needed coupled with an increasingly diverse and talented staff to provide needed leadership and technical skills to respond to the rapidly changing environment.

- New relationships must be formed with library users to support rapid shifts in research and teaching practices.

- ARL and its member libraries must cultivate alliances and partnerships to advance all strategic arenas identified as important for the Association.

Potential Threats and General Challenges

Similarly, all three strategic arenas face some general or common challenges. In the current economic environment, these tend to reflect the more direct effects of resource reductions.

- Outsourcing of dissemination activities and a growing role for content industries in setting policies and defining services could further erode research institutions' control of the intellectual assets produced by research and teaching.

- If libraries turn inward and focus on protecting local resources, they could pull back from essential cooperative work.

- Limited resources will increase competitive pressures between institutions.

- Accountability activities and measures might create a reaction to restrict innovation and return to traditional services under "back to basics" rhetoric.

- Lack of resources will tend to choke needed investments in emerging services addressing new user needs and new kinds of content.

- A substantial portion of ARL's success is attributable to key partnerships that leverage our investments. The current economic environment may present threats to the shared base of resources.

- As uncertainty about the future persists, library staff may tend to cling to the familiar, resisting new approaches to the way they work.

Trends in Scholarly Communication

Scholarly communication has been an active agenda area for ARL for decades and change in the scholarly communication system continues to occur at a rapid, if often uneven, pace. The system of scholarly communication is complex and multifaceted, making it essential that periodic reassessment of trends, particularly those most important for research libraries, occurs. Rather than comprehensively summarizing trends in the scholarly communication system as a whole, the trends identified here were selected because of their particular relevance to the research library.

1. *Budget reductions will have substantial impact on library collecting, at least in the nearer term of the planning cycle. These will present opportunities as well as threats.*

    - Nearly all member libraries will be engaging in journal and database cancellations and many will reduce expenditures on other content creating further stress in the traditional publishing system.

    - Libraries will be particularly hampered by multiyear commitments to large journal bundles with many compensating with deeper cuts to other portions of their collections. Small not-for-profit publishers are likely to be particularly affected as scholarly societies see drop offs in conference participation and membership rates as well as reductions in subscriptions.

    - Over time, serial publishers will enter "cancellation spirals" where prices are increased to replace the publisher's lost revenue from previous year cancellations. Some titles and publishers will disappear while others will merge.

    - Monograph publishing is likely to be curtailed in response to reductions in monograph purchases, which may be deeper in non-library market segments (e.g., students and interested non-experts).

    - Movement away from print publishing will accelerate.

    - The deteriorating economic situation will increase strains on the publishing market and may, in some cases, catch small publishers unprepared. Difficult decisions will need to be made about how best to assist small publishers and which publishers can be supported.

    - New kinds of educational outreach to small publishers and members of scholarly societies will be needed.

    - New opportunities for partnership are likely, but partners will have to be selected carefully. Libraries will be working with non-traditional content providers. Opportunities with potential for scaling initial investments will be especially important.

2. *"New Model Publications" are beginning to move into the mainstream of scholars' communication practices.*

- New models for organization, presentation, production/contribution of scholarship will be common. (ARL's recent report at http://www.arl.org/bm~doc/current-models-report.pdf provides pointers to the kinds of works that are emerging.)

- Scholarly communication practices have now fully entered a phase of near-constant change. (This is not a translation from print to digital, rather the state of progress in enhancing scholarly exchange is ambiguous and libraries find it hard to predict the practices that scholars will adopt and how long they will be perpetuated.)

- New levels of integration among content of diverse kinds are emerging and will provide significant added value to communication systems, increasing the shift to new kinds of scholarly works.

- At the same time, rearrangement and decoupling of functions may accelerate — e.g., peer review may occur after publication or through a separate process.

- New model works are emerging largely outside of the marketplace and traditional publishers, and it is not clear whether they will be adopted by publishers or will ultimately replace the increasingly turbulent publishing market with a different dissemination infrastructure.

- The traditional publishing system is poised for a shift from automation of traditional practices and digitization to more transformative changes.

- The publishing market seems to show some initial signs of a shift from an emphasis on content control and content provision to a market focused more directly on service provision as content producers are less willing to cede broad control of their content to the publishing market. This might be accelerated by the altered economic conditions. Similarly, value added services drawing on open content are likely to expand significantly.

3. *Recognizing that faculty are not just consumers but innovators and, ultimately, arbiters of change, libraries will place a growing emphasis on building relationships with faculty to promote change.*

- Dialog is needed to complement advocacy as shifts to new communication systems occur. Scholarly communication changes will influence a broad spectrum of library/scholar interactions and dialog will reflect the researcher's (rather than the library's) perspective.

- Libraries will collaborate with faculty in developing new models.

- Promotion and tenure evaluations are pivotal in encouraging and discouraging change. Ultimately, these are controlled by faculty. Deep relationships with faculty will be required for libraries to influence positive shifts in these practices.

4. *The impetus to bring dissemination back under the auspices and control of the academy is strengthening but scholars face some conflicting incentives.*

- Preferences for maximizing access and dissemination continue to strengthen among both researchers and research institutions.

- Momentum is growing at the campus and national levels to create new norms for author rights management where authors maintain a greater share of rights to allow use of their work and to grant limited rights to their home institution to assume dissemination responsibilities.

- Strategies, such as institutional policies and institution/publisher contracts, will be adopted to ensure that institutions can disseminate work.

- A growing imbalance between the numbers of aspiring faculty and tenure positions could lead to rising standards for numbers of publications generally and for publishing in what are perceived as the most prestigious outlets.

- Requirements for accountability may increase the emphasis on publishing venues with long track records of success as determined using long-standing quantitative measures of performance, e.g., Journal Impact Factor.

- New quantitative measures of impact may emerge that draw on projects like Google Books to expose the citation content in book literature.

- Yet, research institutions are building a variety of dissemination services, often in conjunction with the development of related cyberinfrastructure.

- New kinds of valuable content are proliferating, providing the opportunity for research institutions to develop different strategies and norms for dissemination that retain the right to make decisions about present and future access and use within the research community.

5. *Transformations in scholarly communication practices are driving development and re-engineering of library services.*

- Libraries are moving into new service areas like publishing support and repository services.

- Repository services are moving beyond pre-print and post-print dissemination to include a wide range of content types, clients, and service needs.

- Service development is occurring through investment in suites of related services such as digitization, repository, and publishing service.

- Library services increasingly are developed in collaboration with other units on campus and with partners at other institutions.

- Library leaders are engaging with campus infrastructure development and working to align library infrastructure.

- Libraries will be developing new partnerships and strategies for cooperatively collecting new materials and managing existing collections.

6. *The role and practices of scholarly communication are becoming more embedded in research practices and cultures. Scholarly communication increasingly occurs throughout the research process and encompasses a wider range of research outputs. This places new demands on libraries.*

    - Librarians need a deep, up-to-date understanding of knowledge creation processes as dissemination occurs throughout nearly the entire research process.

    - Research into faculty behavior and work practices is sorely needed to inform policy and service development.

    - Libraries are moving toward much closer engagement with scholars' research practices to provide support for activities ranging from data curation to publishing services.

    - In the sciences, particularly, there is a danger that libraries will be left out as researchers "go it alone" in managing and disseminating new knowledge.

    - Libraries need closer involvement to meet scholar's needs for tools oriented to research involving digital content.

7. *Large funders are increasingly promoting cyberinfrastructure development but are also developing requirements for management of content (publications and data).*

    - Federal funding bodies will greatly influence the service needs of research institutions. Libraries have to be prepared for policy changes and help position their institutions for greater accountability for the dissemination of research — both data and publications.

    - When policy changes are announced, implementation will occur rapidly, creating opportunities for libraries that have laid the groundwork to exercise leadership.

Trends in Public Policies Affecting Research Libraries

ARL has a long and rich history of working in the public policy arena with a focus on issues of importance to research libraries. Generally, ARL has focused on issues regarding copyright and intellectual property, telecommunications and networking, federal public access policies, civil liberties, national security concerns as they relate to privacy, federal funding of key agencies and programs, and more.

Below, a number of key public policy trends, issues, and "reality checks" are listed that will influence congressional and administrative actions or require the attention of the US Congress and the administration. These public policy issues and trends fall into many baskets — some focused on rectifying previous policy, others that demand attention such as the economy, some refocusing attention on the accountability, transparency and effectiveness of government, participatory democracy, and more. Collectively, they influence what will be considered and/or potentially achieved in the public policy arena over the next several years.

In support of advocacy on selected public policy issues in Canada, the Federal Relations and Information Policy portfolio makes an annual contribution to the Canadian Association of Research Libraries (CARL). Some of the issues, opportunities and trends listed below are US centric though others relate to both the US and Canada interests. A strategic planning document from CARL is attached that highlights key public policy trends of importance to CARL members.

1. *Two issues — the economy and national security — will dominate congressional and executive branch activities. This means that there may be*

   - more resources for higher education to conduct research and spark innovation because "access to education" is a priority;

   - additional funds to the states given the economic challenges they face (it is estimated that state government shortfalls for fiscal years 2009, 2010, and 2011 could be more than $350 billion);

   - fewer resources available for discretionary funding, thus increased pressure to retain current funding levels for existing programs, retain existing programs, and/or make it more difficult to propose new initiatives in selected discretionary program areas; greater competition for limited federal funds in selected areas;

   - a focus on addressing issues such as global warming and tackling energy issues which will also stimulate the economy and influence security issues in the future; and

   - opportunities to rapidly rethink and revamp federal programs such as the Federal Depository Library Program due to the weak economy.

2. *Both Congress and the administration will devote a significant amount of attention to review, repeal, and/or revise government policies in a host of areas, including*

- civil liberties and national security policy; and

- a host of regulatory, transparency (e.g., access to presidential records), and science and technology policies.

3. *There will be a renewed focus by government on technology and innovation issues. Technology is seen as a means to improve and enhance government services, address key national concerns (e.g., energy, health care), and to support accountability of and reduce the costs of government. Innovation and technology are seen as central to our nation's competitiveness, to the advancement of science and more. This may include*

- a focus on how to achieve greater transparency of government;

- the development of new tools and services, with the potential to rely more extensively on the private sector, e.g., search engines;

- the appointment of a Chief Technology Officer within the administration to coordinate governmental activities, investments, and policies; and

- the promotion of network neutrality legislation and related regulatory action.

4. *Continued advances in technology will enhance search and access. The combination of focus on technology, innovation, and a renewed emphasis on science and technology issues may bring into even greater focus the benefits of public access policies and promoting the use of technologies to fully realize their benefits and potential in support of administration goals and policies. This may*

- lead to new government services/initiatives/policies such as the NIH Public Access Policy particularly as access to federally funded resources is seen as advancing innovation and addressing pressing national and international issues;

- lead to new policies promoting open data;

- exacerbate tensions with the private sector concerning the appropriate government role (traditional content) and potentially concerning how the government collaborates with some industries to promote government initiatives (search); and

- spur greater use of large scale data text and data mining tools by government that will increase the tension with some private sector publishers/content producers while at the same time lead to new collaborative relationships between the government and other sectors.

5. *There will be continued focus and tension on copyright and intellectual property issues. It is likely that there will be*

- greater influence by traditional content industries/copyright maximalists in Congress;

- increased complexity and a more restrictive approach to copyright and intellectual property legislation (e.g., TEACH-like and orphan works-like) that will result in less flexibility for users;

- pressures to open up the Digital Millennium Copyright Act; and

- strong interest from the Copyright Office to open up Section 108.

6. *There will be enhanced focus by federal funders on cyberinfrastructure developments and collaborative efforts within the research community. This may include*

- support for ongoing projects such as the DataNet Initiative and the Community-based Data Interoperability Networks program and new projects will be proposed;

- evolving roles for research libraries in e-science, data curation, and publication (there will be continued debate and tension regarding how to fund the curation and management of these federally funded initiatives);

- addressing workforce issues concerning research library roles in digital data curation and cyberinfrastructure; and

- continuation of projects to digitize library collections with ongoing tension concerning public and private efforts and roles.

7. *There will be greater and greater difficulties in trying to balance competing interests, such as*

- the need for greater security and use of surveillance technologies and tools;

- the robustness of the Internet and World Wide Web;

- the use of digital rights management tools; and

- the privacy of individuals.

8. *There will need to be increased efforts to ensure an environment that is conducive to the academy and cultural memory organizations so they can engage in mission-based activities such as preserving the intellectual and cultural content of the academy and to allowing new forms of scholarship to emerge. This may present*

- new opportunities as economic challenges may spur rapid change;

- new difficulties as competition for attention and federal dollars in selected arenas will be problematic; and

- new complexity in policy development if the post of cultural czar is established as a cabinet or senior level position.

9. *There will be a continued focus on accountability and assessment on the local, state, and national levels.*

- New assessment/accountability requirements may be included in legislation as was done in the reauthorization of the Higher Education Act.

- More data will be needed for evaluation/decision making locally to better manage in the economic climate and in response assessment requirements at the national level.

Trends in the Library Role in Research, Teaching, and Learning

A number of factors are influencing how research libraries might position themselves to be effective in the next five years: the proliferation of Web 2.0 technologies; changes to undergraduate pedagogy to accommodate research-based curricula; the rapid transition to e-research; reconceptualization of collections in all formats; a need to collaborate to support large-scale, shared agendas; the down-sizing of on-site print collections coupled with digitization efforts; re-imagining roles for librarians and staff; shifting customer behaviors and expectations; and the rising influence of assessment. The following is a list of trends and issues to consider around the strategic role of the research library.

1. *Profound shifts in research practices will push libraries to construct new forms of engagement and support. This will occur because:*

   - Faculty and graduate students' academic and research behaviors suggest that libraries can provide valuable assistance with research methodologies; identifying, analyzing, and organizing information; and providing penetrating insight into the literature of unfamiliar disciplines. This will lead to new partnerships with IT, curriculum committees, education technologists, laboratories, centers, and the like.

   - Interdisciplinary studies are gaining in strength and number. Foreign language and subject expertise will continue to have value even as departmental libraries and specialists are required to push beyond traditional boundaries of their specialties to provide assistance to interdisciplinary practitioners in new ways. Multi-talented teams may arise to provide support.

   - There is a need to support discipline-centric, interdisciplinary data centers and/or similarly focused e-research enterprises that combine subject expertise, resources, new forms of publishing, data mining, technical expertise, etc., for scholarship and research. Challenges center around a paucity of specialized library personnel, expertise, and infrastructures; issues are more complex when contemplating support for inter-institutional, national, and international research projects. Options are influenced by campus environments and genuine commitments to new forms of support.

   - Innovative collaborations and new partners will become increasingly important as resources become scarce. Selecting the best intra- and inter-institutional partners to create new services and resources will help to alleviate financial strain while supporting innovation and progress.

2. *Research library collections and collecting have taken on new meanings.*

- Special collections distinguish a major research library from all others, and provide incomparable value to graduate and faculty research and teaching. Care must be taken to sustain efforts at collecting, conserving, and describing new and existing content.

- In certain areas of collection building, especially in foreign languages and the comprehensive effort to acquire global resources, a threat to collecting may come from short-term fiscal constraints and budget-imposed retrenchment. Consideration must be given to strategies that sustain the availability of comprehensive foreign language collections.

- Of rising interest and concern is the need to "collect the Web," especially the underlying content of database-composed Web sites. Failure to devise comprehensive strategies for these efforts risks losing cultural and intellectual content for future generations of researchers.

- The Google/authors' settlement will have implications for the way research libraries adapt their support for the teaching and learning agenda, research methodologies, and perhaps with space implications for some libraries.

3. *Research libraries will increasingly deploy services and resources into virtual environments inhabited by students, faculty, and researchers.*

- Web 2.0, as it changes how users and application developers interact with the Web, facilitates communication, creativity, collaboration, and sharing by fostering Web-based communities. Students are the primary drivers, and their information consuming behaviors and work habits will guide libraries in their responses. Today's undergraduates are tomorrow's graduate students. Failure to respond with comprehensive, relevant, evolving, and appealing virtual domains runs the risk of alienating consumers.

- The ubiquitous presence of WiFi, handheld communication devices, smart phones, etc., will spur libraries to re-tool content for mobile users and mobile devices. Libraries will need to be innovative to supply content, tools, and services.

- Course management systems will provide a logical nexus for distributing and highlighting resources, tutorials, communiqués, and other library assets. Library content that is pertinent, timely, focused on student assignments, and complementary to course learning outcomes should become the standard of service. Engagement with teaching faculty will produce best results.

4. *Shifts in pedagogy to "active and engaged learning" are affecting how libraries partner with academic faculty to support student learning, scholarship, and productivity.*

- The trend to embed information literacy into foundation courses and across curricula will increase, in turn creating new opportunities for libraries to contribute to curriculum development, support for research methodologies, and promotion of library resources and services.

- In some instances, library staff engaged in information literacy efforts will spend less time in classrooms and lectures halls in face-to-face instruction, and more time creating learning objects and tutorials, video-

and multimedia-based instruction components, and asynchronous instruction. Expect to see heightened attention to learning outcomes, grading rubrics, and co-teaching with academic faculty.

- As undergraduate instruction shifts to active and experiential learning and research, libraries will draw more heavily on primary materials in special collections, digital image repositories, and data stores to support the new pedagogy. To achieve this, special collections and library instruction staff may intensify their marketing to academic courses, as well as facilitate digital access to these resources.

5. *Libraries will discover opportunities to engage non-typical students as we reinvigorate the definition of "library."*

- The resurgence of distance education enrollment, the popularity of study abroad, and the likelihood of an infusion of government funds to increase student enrollment and the research enterprise will require effective actions.

- Professional programs are on the rise. Students in these programs will benefit from a different approach to library Web page design and content provision; technical skills may be emphasized, with potential roles for libraries to provide training in software applications.

6. *As university budgets tighten, many library building programs and new initiatives will face cutbacks and delays. There will be increased scrutiny and pressure to demonstrate return on investment. These pressures will incentivize some libraries to make profound organizational change rather than incremental adjustments.*

- Exceptional progress has been made to transform research libraries into popular destinations for productivity and learning. Surveys suggest that libraries are seen as the logical providers of primary learning spaces on campus. The undergraduate learning commons is a celebrated success on most campuses. Faculty and graduate students will become more outspoken in their expectations that libraries should address their research and contemplative needs via physical space solutions. There is no consensus on what these responses should be.

- Branch libraries may be expected to relinquish the bulk or entirety of their space to the academic departments they serve. Some libraries and their branches will anticipate this draw down, or suggest it themselves, and respond with services, resources, and instruction programs that are primarily virtual. Some branch library personnel will be deployed into critical new areas, thus making down-sizing of branches an "enabler" for new initiatives.

- Main library buildings may come under increased pressure to accept new tenants and services ("space wars"). Libraries will need to counter with strategies that demonstrate a capacity for supporting research, teaching, and learning, at times in partnership with library-preferred tenants whose service to students and faculty complements their own. To have no plan will risk forfeiture of space.

- The strongest cases for retaining library real estate will be grounded in data derived from user-needs assessments, and qualitative and quantitative evidence of the benefits that libraries deliver to users within these spaces.

- Future success, in part, will be fostered by the adaptability of staff; the recruitment of differently skilled staff; the reorganization of library work and services around emerging academic, research, and learning practices; and a commitment to experiment, innovate, and take risk.

Closing Observations

Leveraging ARL Capabilities

In looking at the challenges, trends and opportunities some established capabilities of ARL are worth noting. Readers may wish to reflect on where there might be important synergies between ARL's strengths and the challenges and opportunities noted. For instance:

- In a period of unprecedented resource constraints and rapid environmental changes, ARL's ability to engage member expertise for community benefit will be especially valuable.

  Through a wide range of programming at membership meetings and forums and through the creation of task forces like those recently engaged with issues relating to e-science, special collections, digital repositories, and depository libraries ARL's governance structure has proven flexible and responsive to emerging issues and opportunities.

- ARL has an enviable track record in influencing federal policy.

  Pursuing policy outcomes that benefit research libraries should continue to be ARL's focus.

- Aligning organizations with common interests and coordinating a variety of agents of the community are very effective ways of magnifying ARL's ability to support member libraries and enhance policy making.

  ARL's leadership in forming the Library Copyright Alliance and its less formal but ongoing coordination with AAU and NASULGC on key issues are but two examples of ARL strengths with this strategy.

- Internal coordination of the strategic directions and the enabling capabilities is another mechanism that has created large returns on relatively small investments.

  As accountability, assessment, and reengineering become watchwords for libraries, ARL's ability to integrate the statistics and assessment capability with strategic directions holds great potential for enhancing and supporting member libraries.

  To exploit the deeper understanding we are gaining of the benefits of a diverse workforce, new forms of support services will be needed to fully profit from our assessment work.

New, particularly technology-mediated, mechanisms for communicating with members also promise to increase the Association's capabilities in conducting its work while conserving limited resources.

- ARL has provided an important function in identifying and promoting best practices and breakthrough strategies for members to apply in their local contexts.

  ARL's recent work in facilitating the development of scholarly communication programs at member libraries; promoting effective assessment practices; creating standardized, informed approaches for facilities planning; and speaking with a singular and convincing voice on policy issues exemplify this approach.

- In order to address unexpected or emerging member interests and needs, ARL has the flexibility to adjust its staff capability.

  By engaging individuals from member libraries as visiting program officers, ARL has been able to extend its staff expertise. The agility fund also has proved effective for acquiring consulting services targeted to emerging priorities.

Finding Resources to Meet Our Ambitions

As a closing observation, it is worth noting that ARL is a small organization in terms of its budget and staffing. Through changing times, the Association staff provides members with a uniquely valuable community resource that also offers selected services that directly support member operations and programs. In this time of historic challenges, we should remember that investments in ARL have to be scaled to the high-priority functions that the planning process identifies. Greater need alone cannot translate directly into increased capacity unmediated by increased investment in the organization. Finally, one might draw a parallel to the founding of ARL in 1932 at an equally disturbed time. Today we face challenges that are no less daunting and collective action will help see us through as it did then.

Attachment: Selected Public Policy Trends in Canada Affecting Research Libraries

**Canadian Association of
Research Libraries**

**Association des bibliothèques
de recherche du Canada**

CARL ABRC

Selected Public Policy Trends in Canada Affecting Research Libraries – January 2009

Government

Canada is likely to have minority governments, whether Liberal-led or Conservative-led, over the next several years as neither the Liberals nor the Conservatives are readily able to form a majority government without major breakthroughs in areas where they have not traditionally won seats (e.g., in the West for the Liberals and in Quebec for the Conservatives). The Liberals have the possibility of rebuilding some popularity in Quebec with Michael Ignatieff as leader. Despite an election in the fall of 2008, the future of the current Conservative government is unclear: it is likely to survive in the short term, but there are no guarantees that its legislative agenda will be able to survive beyond 2009. At any rate, it is unlikely to govern, as it did 2006-2008, as though it had a majority inasmuch as the Liberal Party has stronger leadership in 2009.

As a result of this scenario, it is unlikely that the Conservative government will introduce legislation that will be highly controversial for the general public. In the shorter term, and beginning with the January 2009 budget, government bills will likely focus on business- and industry-friendly measures with a view to economic stimulus. There will probably be infrastructure funding, and universities and libraries may possibly benefit from this.

At the provincial level, few major changes are anticipated that will affect the context of research libraries. With the recent election of a majority Liberal government in Quebec and with the economic downturn, popular favour for Quebec independence there will likely remain quiescent over the next few years.

Economy

A key area for government attention may be the environment, where there may be support for greater development of an environmental "industry," for some industrial environmental regulation, for consumer action, and for some environment-related research. In the longer term, any federal government will continue to grapple with the balance of the exploitation of natural resources (especially forestry, oil and gas, and fisheries) and environmental protection. This will be especially sensitive in relation to the Alberta oil sands development, although the recent fall in the price of oil has already dampened exploitation of these.

Trade development will be important to any government in the coming years. Canadian governments as well as businesses are wary of protectionist elements of the Democratic party looking to renegotiate the North American Free Trade Agreement (NAFTA). Even with NAFTA intact, Canada will likely continue to see erosion of its manufacturing sector, heavily affecting the economy of Ontario.

To counter the current economic downturn, the Canadian government will be looking to mirror US federal government investments and loans to the struggling sectors of the economy (e.g., automotive manufacturing). The federal government will also be spending on infrastructure in

its economic stimulus budgeting. The federal government will be entering a period of deficit budgets after more than a decade of surplus budgets.

As the value of the Canadian dollar against the US dollar is heavily affected by the price of commodities such as petroleum, with the fall in such prices, which will not likely recover in the next several years, the Canadian dollar will remain lower than the US dollar. The Bank of Canada will be unlikely to raise interest rates to raise its value as a lower-value dollar is helpful for export industries and low interest rates are consistent with the government's desire for economic stimulus. The effect of this for Canadian research libraries will be that their acquisitions funding will not stretch as it does when the Canadian dollar is stronger since a large proportion of Canadian library acquisitions and licensing expenditures are in US dollars. The power of the licensing consortia to negotiate favourable terms with vendors may also be diminished by the economic downturn and the weaker Canadian dollar. On the other hand, the economic situation could be favourable to the further development of open access publishing in Canada.

Post-Secondary Education (formerly Universities)

Canadian universities in all provinces will likely continue to be funded at conservative levels, especially during the developing economic downturn. This will likely translate into cuts to university library budgets, which will mean that libraries will have less cash for undertaking new projects. It will also mean a general reduction in hiring, though some retirement replacement will still be necessary. As part of the government economic stimulus program, some infrastructure funding may be directed to universities to assist with a serious problem of deferred maintenance.

The downturn in the economy and the promise of increased government investment in infrastructure could well see more individuals and resources going to Canada's two-year diploma community colleges where return on investment (on the part of the student and the government) can often be more immediately obvious than at universities. The recent conversion of many colleges to universities in some provinces could also have a detrimental impact on enrollment at the older universities and, some would argue, in the overall quality and focus of university education.

There is hope that, perhaps with the inspiration of the new Administration in the US, Canadian federal and provincial governments will see universities and colleges more as important partners in longer-term economic and cultural development.

Cyberinfrastructure

In the coming years, both federal and provincial governments will probably see value in promoting and supporting further developing broadband access to the Internet as an economic development and government communication tool. Government may well see electronic diffusion of publications as a cost-control measure and may well provide funding for digitization and access to Canadian cultural documentation.

At present, the consumer market for Internet access in Canada is controlled by a very small number of large ISP's resulting in high prices for Internet access relative to those in the US. This situation will not likely change soon, though there is consumer pressure on government to take measures to promote a more competitive and open market. The government has recently been investigating alleged compromises to "net neutrality" by the large ISP's.

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Funding Councils

The three federal research funding councils (the Natural Sciences and Engineering Research Council of Canada [NSERC], the Canadian Institutes of Health Research [CIHR], and the Social Science and Humanities Research Council of Canada [SSHRC]) and the National Research Council (the governments own research organization) will not likely see major increases in funding during the economic downturn, although funding to the councils has increased in each budget over the last decade. Recent funding increases have been partly targeted to particular research themes, and this is likely to continue as the government's Science and Technology Strategy is further implemented.

Open Access publication mandates may well be adopted by the funding councils, of which one, the Canadian Institutes of Health Research, has a mandate now. Data preservation will also likely be more widely mandated. Systematic enforcement of the mandates will depend on the development of appropriate repositories, whether disciplinary or institutional. A Canadian PubMed Central is currently in development to which CIHR-funded research reports or articles will have to be contributed.

Copyright

There will likely be a third re-introduction of a bill to amend the *Copyright Act*, which will be primarily driven by the need for WIPO treaty ratification. The amendments will also seek to provide protections to creators and publishers against uncompensated use of their materials in the digital realm. Previous bills have faced virulent opposition from several sectors – often pitting creators against users directly. The Government seems committed to wholesale renewal of the act as opposed to introducing individual amendments. Libraries and consumer groups will hope for greater clarification of what can and cannot be done in the digital realm that may fall under "fair dealing" or exceptions. It is quite possible that new legislation will provide for statutory damages on commercial-level piracy, but not for the (ideally unintended) infringement of individual consumers or libraries. Libraries are advocating in new legislation "format-neutral" and "technology-neutral" wording that will allow the use of new, yet unconsidered, technologies to be covered under the act regardless of its wording.

Security

The Conservative government will likely continue with some military re-equipping and a general anti-crime agenda. While Canada has no particularly acute security concern, border controls, airport security, and the security of identification documentation have all been enhanced over the last decade, partly as a result of US encouragement. Inspired by the US Patriot Act, there have been attempts by government to introduce "lawful access" legislation to make it easier for law enforcement agencies to examine as needed Internet activity of individuals; a new bill may be introduced in the next year. Libraries and other groups will continue to stress restraint and judicial oversight of such access.

Transparency (formerly Accountability)

As in the US and especially in an economic downturn, transparency, accountability, and a demonstration of value for money will be concerns of federal and provincial governments when allocating funding. This may be a special concern in Canada in the aftermath of a government sponsorship scandal that came to light earlier this decade.

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Social Policy (formerly Immigration)

The development of the Canadian economy will heavily depend upon a continued high level of immigration, heavily from East and South Asia. There will be ever greater pressure on governments, both federal and provincial, to facilitate the integration of immigrant professionals into their professions in Canada. This may present opportunities for universities to develop programs aimed at Canadian credentialing of immigrant professionals. Universities will also need to maintain and enhance English or French second-language programming. Canadian universities are being encouraged by the federal and provincial governments to market themselves to international students and some government funding has been provided for this.

The removal of mandatory retirement will be complete in most if not all provinces by 2009. This and the downturn in the economy will affect the ability of both the private and public sectors to recruit young, energetic, skilled staff. For university libraries, this may affect their ability to make changes that will be needed in libraries to remain relevant in a rapidly evolving scholarly communications and pedagogical environment.

Most provinces have in recent years introduced or strengthened legislation and policies to protect the rights of and enhance the integration persons with disabilities. As these policies become more fully implemented and as individuals take fuller advantage of rights and services, there will be costs to be met by universities (and often the libraries) to provide appropriate equipment, software, and alternate format materials for reading- or print- disabled students.

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