Libraries and Librarianship in Israel

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The Historical Perspective

The Beit Ha-Midrash (Study House) is an institution of traditional Jewish culture. For centuries the libraries of the Beit Ha-Midrash,

synagogues, and yeshivas played the role of public libraries and, from the early Middle Ages, were maintained in every Jewish community. These collections were acquired with public funds, open all day long, and their use was free. The books were not lent out, so that whoever needed them could come to the Beit Ha-Midrash to peruse them. Most of the books and manuscripts were in the field of Judaica, though some communities maintained books on philosophy, mathematics, and other subjects. [1]

In Palestine during the years when there was no autonomous Jewish rule, libraries existed in synagogues and Beit Ha-Midrash, as well as privately owned collections. In the 19th century, libraries of non-Jewish communities were also maintained in Palestine, mainly in Jerusalem. These were owned by foreign institutions, and mainly contained books about Palestine for the use of archaeologists, historians, and tourists. There were also collections of theological and devotional character in monastery and church libraries throughout Palestine.

The first library in Palestine to include secular literature was that established in the Jewish hospital in Jerusalem in 1854, which received a delivery of books from Paris in several languages - Hebrew, German, French, English, and Italian. In 1870 the first agricultural school, Mikve Israel, was founded, and in it a library was set up that included 300 volumes, increasing to some 3,000 by the end of the century.

The last quarter of the 19th century saw the opening of the first public libraries in Jerusalem, Safed, and in the new settlements. The first, the Montefiore Book Collection, opened in Jerusalem in 1874 and was swiftly followed by others: Rishon Lezion in 1883, Jaffa in 1886, Safed in 1891, the Abarbanel House Library in Jerusalem in 1891 (which later became the National Library), Petah Tikva in 1892, Zichron Yaacov in 1895, Hadera in 1899, and Sejera in 1902. [2]

The development of these secular public libraries was linked to immigrants that began arriving in Palestine in the latter part of the 19th century. The new immigrants were characterized by higher learning and an interest in general subjects, knowledge of the language of their countries of origin, and a desire to learn the finer points of agriculture.[3]

The 19th century also saw, for the first time, the establishment of libraries for educational institutions, though some of these also served the general public. In 1892 a library was set up in a school in Petah Tikva, under the auspices of Baron Rothschild. Seven years later, a similar library was set up by a teacher in a school in Gedera. In 1890 another library had been set up in a school in Sejera, also by a teacher who came there from Jaffa. The collections in these school libraries reflected the education that the schools provided and generally included religious literature and sometimes also secular Hebrew

literature, as well as, in some cases, French literature (these being the educational trends at that time).

The lack of autonomous municipal governments, which were responsible for the establishment of public libraries throughout the Western world, was to some extent compensated by the General Federation of Labor of the Hebrew Workers in Palestine, or Histadrut, which concerned itself with the workers' interests but also with the provision of cultural life, and regarded the library as a basic social-educational and cultural element. Among other things, the Histadrut set up workers' libraries in many urban communities, mainly beginning in the 1920s and 1930s. Earlier instances of this phenomenon involved small workers' associations that set up small "workers clubs" and "reading rooms" in the late 19th and early 20th centuries.

Schidorksy [4] attributes the growth of the workers' libraries in Palestine to the influence of two factors. The first, the workers' libraries that were set up in Russia and Germany by leaders of the socialist movements, who aimed at educating the people and preparing them for participation in a more just social order. The second factor, the establishment of libraries of the Jewish workers' organizations in Eastern Europe. The Jewish workers' movement in Eastern Europe sought to bring closer the workers and the Jewish intelligentsia. There were secret libraries for the dissemination of revolutionary literature as far back as the 1870s; thus, for example, the secret library set up in 1872 in the Beit Ha-Midrash (Study House) of the rabbis of Vilna, and the library of the revolutionary circle active in Warsaw in 1885-1887, also included legal works with a radical bent as well as prohibited books.

In 1892, the Jerusalem bureau of the B'nai B'rith organization set up the Abarbanel House Library. The founders were four members of the board of the bureau, one of whom, Ephraim Cohen, was appointed librarian. Board members also took a census of the city's residential homes in order to collect books, which were stored in two rooms at the B'nai B'rith bureau. The library was named after Don Yitzhak Abarbanel, last of the sages of Spanish Jewry, who was expelled from Spain four centuries earlier in 1492.

Well-educated individuals who worked at setting up this library came from the old Yishuv (or Jewish community in Palestine), some of whom had studied outside of Palestine. Most of them were educators, and believed in combining modern education with the study of Hebrew. They were undoubtedly motivated as well by envy of the Jaffa library. The Abarbanel House Library initially contained, in fact, belles lettres as well as non-fiction and scientific literature, but it also adopted the goal of amassing all of the Hebrew works and material pertaining to Palestinian Jewry, some of which had also been published in foreign languages. Hence it gave priority to books on Judaism and rare books, and issued appeals to Diaspora Jewry to establish depositories of the books of the Jewish people.

Elementary School Library in the Druze Village of Abo-Snon

It was thus at the initiative of a few individuals that the nucleus of the National Library of Israel was formed. The first to call for the creation of a national library that would collect books in the areas of Judaism and the Land of Israel was Rabbi Yehoshua Heschel Levine of Volozhin, whose article on that topic appeared in the Jerusalem periodical *Havatzelet* in 1872. The Hibbat Zion movement in Odessa also advocated the creation of a national library. Among those active in this connection was the Hibbat Zion member, Joseph Chazanowicz of Bialistok, who, after visiting Palestine in 1890, decided to devote his life to the collecting of books. During 30 years of activity he collected 16,000 books, many of them rare, and transferred them to the Abarbanel House Library.

In 1920 the library was acquired by the World Zionist Organization, and for the first time a professional librarian, Shmuel Hugo Bergmann, was appointed as its director. In 1925 with the establishment of the Hebrew University, it was decided that the library would serve as the National and University Library, and it has held that status to the present day. The library has also served as a public library that is open to all, thus filling a void that existed in Mandatory Palestine.

The National Library

The Jewish National and University Library serves a threefold purpose. It is the national library of the state of Israel, the national library of the

Jewish people, and the main library of the Hebrew University. It serves as a depository for all books published in Israel and also collects material about Israel, the Jewish people, and Judaism, as well as material written in Hebrew script and in other Jewish languages (Yiddish, Ladino, etc.) from every place and time. In addition, it has collections of rare Judaica and Hebraica, manuscripts, and incunabula amassed from all corners of the world. The library also contains one of the largest and best-organized collections on Arab and Islamic subjects in the Middle East.

The library is the main and largest library of the Hebrew University. It provides faculty and students with research materials in Jewish studies, Middle Eastern and Islamic studies, the history of science, Occidental history, early Christianity, philosophy, art, musicology, and other subjects. The library is also open to the general public, which uses its reference and borrowing facilities.

The library contains three million volumes of books and periodicals, as well as many thousands of items in special collections, such as manuscripts and archives, maps and music recordings. Most of the collections are in closed stacks. The library has about 11,000 manuscripts, 9,000 of them in Hebrew and the rest in Arabic. The library's Paleography Project is conducting research on the codicology and paleography of medieval-dated Hebrew manuscripts. Also within the library's framework is the Institute of Microfilmed Hebrew Manuscripts, which has undertaken to collect microfilm copies of all Hebrew manuscripts extant in public and private collections throughout the world. Over 60,000 manuscripts, representing 90% of known Hebrew manuscripts, are already available to scholars.

Among the library's special collections are the Depository Collection of the United Nations, which contains publications of the United Nations and documents of the League of Nations; the European Union Depository Collection; the Gershom Scholem Collection in Kabalah, mysticism, and the history of religions; and the National Sound Archives, which contain audio material of musical traditions of various Jewish and non-Jewish communities in Palestine and Israel, dating from the 1930s to the present. The National Library also contains about 400 personal archives of outstanding Jewish individuals, especially scholars and artists. Among these, the Albert Einstein Archives include the largest collection of original Einstein manuscripts in the world as well as his vast correspondence with the most influential physicists and intellectuals of the 20th century.

The Jewish National Library publishes the *National Bibliography (Kiryat Sefer)*, an annotated bibliography that contains entries for all works on Israel, Jews, and Judaica published in Israel and abroad. The library also publishes a bibliography of periodical literature called *Index of Articles on Jewish Studies*, which covers journals and periodicals from all parts of the world. Another research tool prepared by the library is a retrospective bibliography of books printed in Hebrew characters, now on CD-ROM, *The Bibliography of Hebrew Books, 1472-1960*.

Academic Libraries

When the state of Israel was proclaimed in 1948, it had two universities: the Israel Institute of Technology (or Technion), founded in Haifa in 1924, and the Hebrew University of Jerusalem, established in 1925 on Mount Scopus. Since then five more universities have been established: the Weizmann Institute of Science (1949), Tel Aviv University (1953), Bar-Ilan University (1955), the University of Haifa (1963), and Ben-Gurion University of the Negev (1966) and the Open University (for distance education). Today there are also many colleges, some of which were formerly teacher seminaries, as well as regional colleges. In recent years many of these have been upgraded to institutions granting academic degrees. Several foreign universities (mostly European) operate branches in Israel.

Israeli universities do not have a uniform model of the library. Whereas the University of Haifa has a single main library serving all departments, other universities have many departmental libraries, for example, Bar-Ilan University and the Technion. Some universities such as the Hebrew University of Jerusalem have adopted the model of large faculty libraries.

The Hebrew University is also exceptional in that the university library is a national library as well, and thus maintains large collections as stipulated by the Law of Deposit such as the Hebrew (see below), and in fact aims at including everything that has been published about Israel, Judaism, and Jewish history. Most of the books in Israeli academic libraries are in English rather than Hebrew. In the fields of Judaism and Hebrew literature, of course, many of the books are in Hebrew. There are also books in various other languages.

The Hebrew University has a total of 12 libraries including the National Library, the Library for Humanities and the Social Sciences (600,000 volumes), the Science Library (300,000), the Law Library (300,000 volumes), and the National Library of Medicine.

The Weizmann Institute of Science, located in Rehovot, includes a main library and five faculty libraries: the Life Science Library, Chemistry Library, Physics Library, Mathematics Library, and Science Teaching Library, as well as departmental collections. The entire library system comprises about 250,000 books and bound volumes, 1,600 journal subscriptions, and over 20 online databases.

The Technion's libraries contain about one million volumes on engineering, natural sciences, medicine, and social sciences, as well as 5,000 journals. The collection is distributed among the Elyachar Main

Public Library of Hadera. Mother-Input Class

Library and 20 departmental libraries. The Main Library develops and maintains the Technion's electronic library, which contains hundreds of databases for literature search, thousands of full-text electronic journals, and a computerized catalogue that includes both books and journals.

Tel Aviv University has a main library with 1,200,000 books and periodicals. Other libraries on the campus include: the School of Education Library, Law Library, Library of Life Science and Medicine, Library of Exact Science and Engineering, and Library of Social Science and Management; these contain 700,000 additional books and periodicals.

Bar-Ilan University's library network consists of a main library, 16 faculty and departmental libraries, and specialized research collections. The entire collection contains approximately 850,000 volumes and over 4,000 periodical subscriptions.

Three important projects are conducted at the Bar-Ilan University Library. The first project is the generation of Subject Headings in Hebrew, a Hebrew parallel to the Library of Congress Subject Headings, for use in the university's subject catalogue. In the field of Judaica, LCSH are translated, if existent, otherwise new subject headings are created (in Hebrew). The second project, prepared by the Law Library, is an *Index to Legal Periodicals in Israel*, covering some 20 periodicals in Hebrew and in English, that are published in Israel on legal and related issues. The print version of the index is published every five years. Today a 900-page volume is available that covers the years 1976-1996. All of the material, including up-to-date information, is also found on the university's ALEPH network (though not on the Web). In recent years, articles published in foreign periodicals that discuss Israeli legal issues have also been added to the database. For indexing purposes, a Hebrew-language thesaurus on legal issues was constructed. The third project, the *Index to Literary Supplements and Literary Sections of the Hebrew Daily Press in Israel, covers the period of 1985-1994*. This project has now operates online, so that future indexes will appear more expeditiously.

The University of Haifa's main library system contains a collection of some two million book and non-book items. Most of the books are shelved on open stacks. This library puts a special emphasis on non-book materials, which include a collection of 84,000 slides, over 17,000 maps as well as air and satellite photographs, and thousands of cassettes and videocassettes. The reprints are stored in a computerized database. There is also a laboratory for children's librarianship with a large collection of children's literature in Hebrew and Arabic.

One of the most important projects that have been launched at the University of Haifa is the Index to Hebrew Periodicals, which indexes all periodicals published in Israel. The project has been automated from its inception, and now contains about 530,000 records altogether. It covers articles from about 500 Hebrew periodicals.

Ben-Gurion University of the Negev in Be'er Sheva houses 750,000 volumes and subscribes to 4,700 periodicals. The library system includes two special libraries: the library of the Institute for Desert Research, and the library of the Institute for the Heritage of Ben-Gurion.

Inter-University Cooperation

In 1969 the government established the Israeli Standing Committee of the National and University Libraries (SCONUL), a voluntary forum for discussing problems of policy and planning. SCONUL initiated an interlibrary loan system among the universities and set up a group of committees to deal with cataloguing, acquisition, reference periodicals, and circulation.

In 1979 the Hebrew University developed a library automation system (ALEPH) that was adopted as the software programme of the university libraries in Israel. The Grants Committee of the Israel Council of Higher Education has also contributed to this by subsidizing the university libraries' participation in ALEPH. Today, all the catalogues of the universities and of many of the colleges in Israel are on the ALEPH network and there is a consolidated list of monographs.[5]

The *Israel National Catalog* currently lists over 4.2 million books, periodicals, and audiovisual items in 43 university, college, and special

libraries. The Web version of the catalogue uses MARC format and ALEPH-500 software. Both Hebrew and Latin characters can be searched. The old version of the catalogue is still used for all scripts, including Arabic.

In 1996, the Association of University Heads created the position of a network coordinator to represent the ALEPH users. In 1998 the university heads established a consortium framework, the Israel Center for Digital Information Services (MALMAD). MALMAD's main function is the acquisition, licensing, and operation of information services to all the Israeli universities, thereby making databases, directories, and digital journals available to the universities.[6]

Public Library of Hadera

Public Libraries

Just 15 years after the establishment of the state of Israel, in the 1960s, in the framework of an attempt to change the educational system toward promoting social equality and integration in the new society composed of immigrants from various cultures, the government began to address the issue of public libraries.

In 1962 a Department of Libraries was created in the Ministry of Education, its task being the encouragement of public libraries, which a good half of the communities in Israel had long lacked, while only a few of the existing libraries met the criteria for proper service in terms of collections, opening hours, and manpower.

With the development of libraries, there has been an ongoing and gradual increase in the percentage of registered readers in the public libraries. In 1985, 25% of all residents of the state were registered in libraries. Simultaneously, a slight decline began in the number of readers. By 1993, 18% of residents were registered in public libraries; this percentage remains stable until today. In the cities the readers amount to 15%, in the regional councils 8%, in the local councils 24%, and in the Arab sector 13%.

Today there are 266 administrative library units in Israel, which together encompass 1,233 service points (including all of the branches). Fifty of the units are located in community centres, the forms of association with the community centre differing among the libraries. Of all the libraries, 120 have a combined function, serving as well school libraries. Eighty of these libraries operate in elementary schools, 40 in high schools.

According to the findings of a 1993 survey by the Center for Information and Research, there were a total of 11,194,346 books in the libraries, 789,564 of them new (7%). That year there were 995,668 loans per month. Some 47% of the urban libraries contained from 50,000 to 100,000 books.

Collections

Today most of the collections are in Hebrew, despite Israel's being an immigration society. For many years, a melting-pot conception of immigration prevailed in Israel. A survey done in the 1990s found that only 11% of all the collections in public libraries were in foreign languages, and most of it not in dynamic collections. [7]

During the 1990s a different understanding of immigration developed in Israeli society, as it came to be understood that immigrants have an inner need to preserve their mother-tongue and cultural heritage. In the library field, this was manifested by a greater emphasis on materials in languages spoken by the immigrants in a given community. To aid the libraries in this regard, a central Russian-language library was set up, in the wake of the large wave of Russian immigrants in the early 1990s. Located in the main library of the city of Netanya, it provides libraries throughout the country with books in Russian for extended periods of lending, in addition to the books these libraries acquire. There is also a central library for books in French that is located in the town of Dimona.

As for non-book collections, they are not found in most of the libraries. Only a few libraries have audio or video collections. Recently, however, libraries have begun to make computers available to the public, offering multimedia materials, games, and access to the Internet.

Services

Lending services and reading room services are separate for children

(up to the age of 14) and for teenagers and adults. The existing enrichment activities are mainly for children, and include such features as: story hours, meetings with authors, workshops (for example, in creative writing), and special activities during vacations such as literary quizzes. Some of the libraries also hold cultural activities and lectures for adults. The city library of Tel Aviv, which is the largest library in Israel, is notable for its great emphasis on cultural activities. Certain other activities are offered only in some of the libraries: exhibitions, special activities for the elderly, cooperative activities with schools, and visits by classes and kindergartens for library instruction.

The profile of the readers in the Israeli public libraries is very similar to that in the United States. Two-thirds of the readers are women, and the younger age group is also disproportionately represented. Only 9% of the readers have just an elementary education, while 50% have a high school education, 21% a post-high school education, and 24% an academic education. School and college students, along with white-collar professionals, are disproportionately represented and together constitute 69% of all readers registered for book-lending services. In Israel, too, the lending services cater to the middle-class, educated stratum and to the young.[8]

Budget

Funding of the Israeli public libraries is the responsibility of the local governments, which determine their budgets; there are substantial differences in amounts allocated by the different local authorities. In addition, the libraries receive some support from the Ministry of Education and Culture, though the proportion of its budget allocated to libraries has declined over the years. Over the past 20 years not a few libraries (in 70% of the urban communities) have resorted to collecting fees for subscriptions to lending services. This source constitutes 5% of the libraries' budget.

The Library for the Blind

The Library for the Blind has two branches, the central branch being located in the coastal city of Netanya (approximately 30 km. north of Tel Aviv) and a branch in south Tel Aviv. In order to facilitate the book-borrowing by the visually impaired, the Library for the Blind delivers the books through the mail. Books can be ordered by telephone or through e-mail. The collection includes books in Braille, audio-books and certain special materials, almost all of it produced by the library (between 700-800 titles per year). For example the library adds Braille to children's books in print, thereby providing a reading experience for parents with visually-impaired children or for visually-impaired parents with sighted children. Special emphasis is placed on preparing the regular learning materials visually-impaired children for visually-impaired children, all of whom are today mainstreamed in the educational system in Israel.

Three Main Bodies Active in the Field of Public Librarianship

The Department of Libraries, Ministry of Science and Culture

This agency was set up in the 1960s to encourage the establishment of public libraries in the Israeli local municipalities. The Public Section (later Department of Libraries, Ministry of Education and Culture, and is now part of the new Ministry of Science and Culture) was founded by C. I. Golan, who later became its first director. Golan regarded the library as a means of social integration; the model he adopted was that of independent local libraries receiving government funding, but retaining complete intellectual freedom.

The Department of Libraries acts to:

- encourage the establishment, advancement, and cultivation of libraries;
- provide financial support to libraries;
- initiate measures to obtain resources for libraries;
- extend support to major agencies that provide services to libraries;
- provide professional assistance for the activities of libraries in the form of supervisors/regional officials who visit the libraries and offer guidance on their administration;
- collect and consolidate data on the public libraries; and
- supervise the implementation of the Public Libraries Law.

The Council for Public Libraries

The Council for Public Libraries is comprised of 22 persons who are concerned with culture and libraries, including academics, librarians, educators, publishers, representatives of government agencies, and representatives of local government. According to the law, the Council is a statutory body with which the minister of education and culture must consult on the implementation of the Public Libraries Law; it may also initiate its own proposals.

The Council's main activities are in the field of the planning and development of public libraries, including such matters as areas of development, the formulation of objectives for the public library in Israel, the establishment of criteria for the allocation of government support to the public libraries, the determination of the resources that public libraries require, the training and instruction of librarians, standards for libraries, professional ethics, and organizational arrangements.

The Council's practical activities are carried out by standing committees, and the results are presented for the Council's approval. Among the committees are: the Committee for the Planning and Budgeting of the Libraries, the Committee for Standards, the Committee for the Education of Librarians, the Committee for Promotion and Public Relations, the Committee for Computerization and Telecommunication and the Committee for Ethics and Copy-

rights. Ad hoc committees are also formed occasionally to check into matters of immediate concern.

The Israeli Center for Libraries

A decision made in the 1960s to learn from the Scandinavian model of a public library system led to the creation in 1965 of the Israeli Center for Libraries, designed to provide central services to the libraries. The Center provides central cataloguing services to public and school libraries in Israel, for most of the publications extant in Israel. The Center also publishes tools for librarianship, including an adaptation of the rules for cataloguing (AACR), and a Hebrew translation of the Dewey Classification system that includes adaptation for local use. It also publishes the professional journal *Yad La-Koreh*, and a journal, *Leket-Bikoret* devoted to selections of critical commentary on newly published books in Israel. The Center has also constructed a thesaurus in Hebrew for subject cataloguing in public libraries and school libraries. It also publishes professional literature, offers an array of courses and training, serves as the Israeli representative of ISBN, provides counselling services to libraries in the areas of management, architecture, equipment and furnishing of libraries, and supplies products and services for the encouragement of reading.

School Libraries

During the first years of its existence Israel absorbed massive waves of immigration, and the focus in those years was on the establishment of a school system. Many of these had, for a long period, only small numbers of books or small library collections. Only in the 1970s, with the increased awareness of the importance of school libraries, were school libraries slowly established.

The Ministry of Education instituted three reforms concerning elementary school libraries:

– Teachers serving as librarians had to be allotted 4 to 17 hours per week to run their library.
– A central book-selection committee was established to purchase and distribute free books to low-income communities.
– Space had to be allocated for a library when any new school was built.[9]
– A 1983 survey of school libraries revealed that from 1964 to 1982, the proportion of students in the Jewish sector attending a school with a library grew from 38% to 79% in elementary schools and from 77% to 93% in high schools; in the Arab sector the increase was from 4% to 47% in elementary schools and 47% to 81% in high schools.

In 1988 the Department of Libraries of the Ministry of Education and Culture also assumed responsibility for dealing with school libraries, and this led to the intensified cultivation of existing libraries and establishment of new libraries in schools that still lacked them. Great efforts were invested in tandem with the local authorities, the schools, and other agencies in the Ministry of Education. Instructions were published for the planning of libraries; supervisors from the Department visited the schools for consultations; courses and study days were developed for the school librarians. The findings of a survey done by the Department in 1993-1994 indicate a substantial increase in the number of school libraries in Israel, with libraries functioning in 87% of the high schools and 83% of the elementary schools. During 1992-1994 alone, an average of 66 new libraries were established per year. Each year the Department of Libraries assists about 200 schools in the building and computerization of their library's collections.[10]

The Department encouraged the libraries' involvement in projects related to the new study program and new modes of instruction and learning in the educational system. Since the early 1990s a concept has developed of the library as a "resource centre", and there has been a countrywide effort to upgrade the libraries into resource centres.

Today there are a total of 2,070 elementary schools in Israel (in the educational streams of all sectors, including private and small schools of the ultra-Orthodox) and 1,350 high schools.

The Ministry of Education's regulations require that there be a librarian in every high school but not in every elementary school. Thus, whether there will be a librarian at all, and with what scope of activities, is determined solely by the principal of each elementary school; hence the high school libraries enjoy a better situation. Twenty percent of the elementary schools still lack libraries, as do 10% of the high schools (although library services

School Library, Kibbutz Dafna

may be received from other libraries, for example, from a dual-purpose public library, or the library of a neighboring school). In spatial terms, the average elementary school library encompasses 68 square meters, the average high school library 129 square meters.

Some 74% of high school libraries are open five to six days a week, in comparison with only 40% of elementary school libraries.

The average number of books per high school library is 8,662; per elementary school library, 3,940. Forty-one percent of all schools maintain a supply of books for guided reading, with an average of 254 such books per library.

In the elementary schools two-thirds of the books are fiction, while in the high schools two-thirds are nonfiction. Many of the libraries maintain periodicals; but in more than half of them the audiovisual equipment may be found only outside of the library. The library clearly serves as a main location for the on-site perusal of nonfiction books. In 40% of the schools, nonfiction books are also read in class. [11] Class libraries for grades 1-3 exist in a few hundred classes throughout the country, in a general framework of class libraries that have operated for years with the objective of encouraging reading. [12]

Undoubtedly the situation of the high school libraries is better than that of the elementary school libraries, although there is more lending of books for free reading in the elementary schools - reflecting the phenomena of declining reading as students get older and of greater emphasis in elementary schools on the encouragement of reading.

Special Libraries

In Israel about 600 special libraries operate in government agencies, institutes and research centres, hospitals, museums, banks, corporations, and enterprises.

One special library is the Library of the Knesset (the Israeli parliamentary body), which began to operate spontaneously with the establishment of the state and its governmental institutions. The establishment of this library involved a dilemma about its character: whether a library dealing only with political subjects or one dealing with a wide variety of subjects. It was decided that the Library of the Knesset would serve as a deposit library, with all material published in Israel being submitted to it.

The Library of the Knesset's main role is to serve the members of Knesset and support the legislative process. To this end it includes an Information Center, which was set up in 1973 and prepares surveys on subject areas at the request of members of Knesset and their aides or of the various Knesset committees and bureaus. Those who operate the Information Center must have an appropriate academic education in the areas of social science, history, or economics, and are aided by computerized databases, national research institutes, official statistics published by government agencies, and the books available in the parliamentary library. The Knesset Information Center maintains close work relations with government and commercial agencies in Israel and abroad. In addition to supplying information on request, the Center initiates publications on public issues that are of parliamentary interest.

The library serves those who come to the Knesset, including: members of Knesset, parliamentary aides, party workers, Knesset workers, members of the Knesset guard, members of research institutes, and also legal and economic advisers, parliamentary journalists, and high government officials.

In the framework of the Freedom of Information Law, the library provides citizens with information on the activities of the Knesset and its committees, on bills presented and laws enacted, by means of the telephone, mail, fax, and the Knesset's Internet site that is operated by the library. The library also supplies information on the activities of the Israeli legislature to foreign television and print journalists, and to foreign embassies and parliaments.

The material in the Knesset Library is closed to readers other than the members of Knesset, and is perused in the reading room after being requested in advance with the help of the catalogue. The collection contains some 100,000 books, 500 different periodicals and newspapers, 3,000 thousand government publications from the full range of government offices, legislative material and records of the Knesset and the government, material received from international parliaments and organizations, commercial and legal compact discs, and daily journalism in microfiche or printed form.

A prominent group among the special libraries is comprised of the medical libraries. At present there are about 80 medical libraries in Israel of various kinds. Israel has four medical schools (at the Hebrew University, Tel Aviv University, the Technion, and Ben-Gurion University), each with its own large medical library. In addition, all of the hospitals have medical libraries, some of them larger and some of them staffed by only one person.

All of the medical libraries are organized in a national network. The network began its operation in 1975, aiming to promote interlibrary cooperation based not only on the sharing of resources but also on specialized biomedical information and professional skills. Each of the four academic medical libraries is responsible for coordinating the work of all the medical libraries in its region and operates a fully interactive network of its own. [13]

In 1978 the Tel Aviv Medical Libraries Consortium was established. It consists of the Library of Life Science and Medicine of Tel Aviv University and the libraries of seven hospitals in the central region of the country that are affiliated with the university's School of Medicine. The Consortium is centered at the Tel Aviv University Library. To

facilitate the sharing of resources, agreements have been reached on standardized work procedures, cataloguing and loan regulations.

In the southern part of the country, there is a network consisting of the Medical Library of Ben-Gurion University (which serves the university, students, and Soroka Hospital, which serves as a teaching hospital) and all the medical libraries in the region (including those of the hospital in Eilat, the Mental Health Center, and of all the clinics in the Negev). This networking enables the Medical Library to provide library services to all health personnel in the region and to medical students.

The university library makes purchases for all the medical libraries in the Negev. Anyone may enter the library and make use of its materials, including army doctors, patients, and even high school students.

The central medical library in Soroka belongs to the above-mentioned interlibrary lending consortium whose center is at the Medical Library of Tel Aviv University. The medical libraries of the Technion in Haifa perform a similar central function for the northern region, and those of the Hebrew University in Jerusalem for the Jerusalem area.

Israel's high-tech companies, software, telecommunication and biotech, usually have modern information centres, as do many other industries. One example is the library of the Motorola Company; another is the information centre of ECI Telecom, which produces integrated networking solutions for the expansion of telecommunication networks and the transmission of telephone, video, and data services, and employs three librarians and two information specialists. The library includes over 10,000 volumes, 404 periodicals, thousands of standards, online databases, and information CDs.

The Arab Sector

The Arab sector accounts for 18.6% of the population (the total population of Israel is 6.2 million). They live in 126 settlements and consist of three different groups: Moslem Arabs including Bedouins (79.7%), Christian Arabs (11.5%), and Druze (8.8%). Thirty-five percent of the Arab population live in eight mixed towns or cities, the remainder in exclusively minority towns (88) and villages (35).

Academic and Research Libraries

The five universities - the University of Haifa, the Hebrew University, Tel Aviv University, Ben-Gurion University, and Bar-Ilan University - offer courses in Oriental Studies, the Middle East, and Arabic. Each of these universities maintains large academic collections of literature in Arabic that serve the academic departments.

The University of Haifa has a large Arab student population, and its library is used by Arab teachers and high school students in the area. Hence its policy is to build a more comprehensive collection of Arabic books in all subjects. [14] It also has a collection of children's literature in Arabic.

Israel also has three colleges for training Arab teachers: the Academic Center for Training Arab Teachers (part of Beit Berl College), the Arab College in Haifa, and the Islamic College in Bakaa al-Garbia. Each of these has a library that provides resources for instruction.

Beit Berl College, for example, has books in various areas of instruction including science, psychology, sociology, education, Islamic culture, the Arabic language and its history. The collection comprises 50,000 information items in all areas of knowledge, and more than 80 periodicals and newspapers in Arabic. The librarian travels each year to the book fair in Cairo, and there orders books that have been published in Egypt, Jordan, Saudi Arabia, Kuwait, Morocco, and Sudan. Few books in Arabic are published in Israel: a small amount of fiction, and a small amount of scholarly works.

There are also research institutes in the field of Oriental studies, among the better-known ones being the Truman Institute at the Hebrew University and the Moshe Dayan Center at Tel Aviv University, both of which maintain books, periodicals, and daily newspapers from Israel, the Palestinian Authority, and Arab countries.

The Moshe Dayan Center for Middle Eastern and African Studies is

Children's Reading Room of the Public Library of Hadera

an interdisciplinary research centre devoted to the study of the modern history and contemporary affairs of the Middle East. The Center has been particularly strong in the study of Islam and politics. Arab-Israeli relations are also a prime area of research interest; another traditional strength has been the study of Palestinian affairs and the Arab minority in Israel.

The library contains the Press Archives, which is the most comprehensive collection of the contemporary (post-1950) Arabic press in the world, including over 2,000 distinct titles and 11 million individual issues of newspapers, magazines, and periodicals. The library also has files of American, British, and Israeli radio monitor reports on the Middle East, going back 40 years. In addition, it maintains a computerized database of bibliographic references to Western and Arabic periodical literature, dating from 1979 to the present.

The Harry S. Truman Research Institute for the Advancement of Peace was founded in 1965 and is part of the Hebrew University of Jerusalem. The Institute supports major studies in history, politics, and social developments of the non-Western world, with particular emphasis on the Middle East. It contains a Library and Document Center, which serves its associates as well as other researchers of the Hebrew University, the country, and the region.

There are other institutions in Israel that, though not part of universities, conduct research on the Middle East and maintain collections in Arabic. These include the Givat Haviva Institute for Advanced Studies; within its framework is the Jewish-Arab Center for Peace, whose information centre includes a collection of a few-score items in the field of Oriental studies, including, among other things, files of newspaper articles published in Israel and various Arab countries. Use of this collection, which offers items in Arabic as well as Hebrew and English, is open to all, but it is especially used by lecturers, doctoral and other students, and high school students working on term papers, including many students from the nearby Arab settlements of Wadi Ara.

Public Libraries

During the Mandate period there were no public libraries for Arabs. Until Israeli educational patterns began to influence the Arab sector, religious organizations played an important role in promoting reading and libraries among the literate elite of this sector. The Moslem Religious Endowment (Waqf) still maintains two libraries, in Jerusalem and Jaffa. Their collections consist mainly of Moslem religious and legal literature (Sever, 1979).

Also in the Arab sector, the Histadrut played an important role during the pre-state era and the two first decades of statehood. The Arab Department of the Histadrut established 47 clubs in villages of the Galilee and central Israel, each containing 500 to 3,000 library items.

Since 1948 the Arab libraries have been almost exclusively initiated and operated by Jewish authorities, mixed municipalities, the Histadrut, the Prime Minister's Office, the Department of Libraries of the Ministry of Education and Culture, and other Jewish and Arab organizations. [15]

The development of modern libraries by the Arab community itself began in the 1970s. This reflected social, political, and educational changes that encouraged the creation of library services in the Arab and Druze sectors. During the 1960s the Ministry of Interior encouraged the development of Arab local self-rule, and the Arab communities began to change. A vast improvement in Israeli communication and transportation systems gave Arab villages access to neighboring urban centres. The combination of high population growth and high unemployment impelled the younger generation to seek employment outside the villages. There was also a growth of light industry and commerce in the villages, in addition to agriculture.Young people went to the universities, and in the villages new political power centres began to grow.

Today there are 52 independent public libraries in the Arab settlements, three other libraries that constitute branches of regional libraries, and five libraries in mixed settlements. Forty Arab settlements still do not have libraries. About one-third of the libraries in the Arab sector are concentrated in schools and serve as combined libraries. Indeed, most of the library users in the Arab sector are children and teenagers.

School Libraries

Before the British Mandate there were only a few Arab schools in Palestine, supervised by the Turkish Ministry of Education. The British authorities regarded the educational advancement of the Arabs in Palestine as an important goal. The public school system was designed mainly for the Moslems, while Christians had the missionary schools. The British Mandate's efforts, however, lagged behind the Arab population's growth rate, so that many children still received no education. [16]

The Compulsory Education Act of 1949, which obligated parents to enroll children in schools, led to a great improvement in the Arab sector's educational level. In Israel today there are 417 Arab elementary schools and 202 Arab high schools. Recent years have seen an impressive growth in the number of school libraries in the Arab sector, reflecting the encouragement of increased awareness among the school administrators. This is especially notable in the Druze sector.

Advisers from the Department of Libraries visit the libraries and offer them assistance. At present, 70% of the elementary schools have

a library and 84% of the high schools.

Most of the works in these libraries are in Arabic (71%-83%), and only a small proportion in Hebrew (see Table 1). Books are purchased from Arab countries, particularly Jordan.

Table 1. Language Diversification of School Library Collections

Sector	Hebrew	Arabic	English	Other language
Jewish	94.3%	0.4%	4.5%	0.8%
Arab	13.6%	76.6%	8.4%	1.4%
Druze	21.2%	70.5%	5.7%	2.6%
Bedouin	10.5%	82.6%	7.0%	0.0%

Source: Ministry of Education, Department of Libraries, *Survey of School Libraries* (1996).

The average sizes of school libraries' collections are shown in Table 2.

Table 2. *Average Sizes of the Collections of School Libraries*

Sector	Average items per collection	Average items per student
Jewish	6,831	15
Arab	3,777	7
Druze	2,706	5
Bedouin	2,068	4

Source: Ministry of Education, Department of Libraries, *Survey of School Libraries* (1996).

Collections are smaller in the Arab sector than in the Jewish sector because most Arab libraries were established more recently and have not yet acquired a large stock of books. Arab libraries tend to limit their collections to material directly related to the curriculum, and do not purchase many fiction books. Moreover, it is difficult to obtain material in the Arabic language, since it must be ordered from foreign countries (this is also affected by the political situation in the region).

The average circulation in the Arab sector is much lower than in the Jewish sector (see Table 3). This reflects the small size of these collections, the libraries' focus on non-fiction, and the fact that in the Arab sector the school library is perceived mainly as a resource for study and not for free reading.

Table 3. Average Circulation per Library and Reader

	Jewish	Arab	Druze	Bedouin
Average circulation per library*	1,519	916	385	628
Average circulation per reader*	6	3	2	3

Source: Ministry of Education, Department of Libraries, *Survey of School Libraries* (1996).
*Average loans/borrowings per two months.

Legislation

There are three laws that have bearing on libraries in Israel.

The Law of Deposit (1953). This law replaced the Mandatory regulation and stipulated a requirement to deposit five copies of every book that is printed in Israel and also of each new edition. The law requires that two copies be provided to the National Library, and one each to the Library of the Knesset, the State Archives, and the Ministry of Education and Culture. On the basis of this law, copies of most books published in Israel are deposited and are maintained in the National Library. At present there is discussion of amending this law so that it would also pertain to other physical formats for storing data.

The Public Libraries Law (1975). The Law of Public Libraries in Israel states that the minister of education and culture is authorized to recognize the existing library of a local authority as a public library, and to order a local authority to maintain and administer a public library in the area of its jurisdiction. Each year the minister is to determine the level of the state treasury's participation in the establishment and maintenance of libraries. Public library services must be provided for free, although fees may be levied for special services. The law also mandated the creation of a Public Council for Public Libraries comprised of librarians, educators, and public figures, whose functions include advising the minister on policy issues. Although the law does not require that each local authority maintain a public library, it has made a great contribution to the establishment of public libraries in Israel, and the Public Council whose creation it stipulated has considerably influenced the activities of the public libraries. A bill to amend this law was recently submitted to the Knesset.

The Freedom of Information Law (1998). This law stipulates the right of every Israeli citizen or resident to receive information from a public authority. It defines information as "any information that exists within a public authority and is written, recorded, filmed, photographed, or computerized".

Professional Organizations

There are two relevant professional organizations in Israel. The Organization of Israeli Librarians was set up in 1952, and its members are mostly librarians of public and school libraries. The Association of Special Libraries and Information Centers in Israel (ASMI) was founded in 1966, and mainly encompasses academic libraries and special libraries.

Professional Education

Until the first school of librarianship was established in Israel in

1956, an Israeli could only become a professional librarian by going to Europe or the United States for training. Under the directorship of Professor Hugo Bergmann (1920-1935), the National Library sent employees abroad for training, or sometimes employed immigrant librarians who had been trained in their home countries.

During 1936-1947, the library profession came to be regarded differently. Fewer people went abroad for training, instead receiving short courses at the workplace as well as on-the-job training. [17]

In 1951 Leon Kranovski, a professional from the University of Chicago's school of librarianship, was sent to Israel by UNESCO. He recommended in a report, among other things, that an academic school of librarianship be established in Israel. In 1956, the first such school was set up as an academic department at the Hebrew University of Jerusalem. The School for Librarianship, Archivism, and Information Science of the Hebrew University now offers MA studies as well as a doctoral degree in four areas of specialization:
– Information studies
– Administrative and social aspects of libraries and information centres
– The study of the Hebrew manuscript and book; the history of collections and libraries
– Archivism

In 1973 library studies were also inaugurated at the University of Haifa, training courses having been provided there since 1971. As of today this is a small department that offers a postgraduate diploma as well as a librarianship track within the framework of a general BA.

In 1974 Bar-Ilan University opened a department of librarianship that became, over the years, the largest such department in Israel, offering a BA, MA, and Ph.D. In 1999 the department changed its name to the Department of Information Science. The areas of specialization are:
– Information science- organizational information services
– Information science - knowledge management
– Information science - information technology
– Information specialization in cultural and educational institutions
– Social information.

Under the sponsorship of Bar-Ilan University, BA studies are also offered at Ashkelon College. In addition, there are three colleges that offer teachers concentrated study courses of one day per week over three years, for a non-academic degree in librarianship - namely, Beit Berl (Cfar Saba), Oranim College (Haifa), and David Yellin College (Jerusalem).

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Social Science Information - The Poor Relation

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Introduction

Thirty years ago I initiated some research into social science information needs and services. The first study was called INFROSS

(Information Requirements of the Social Sciences) and aimed to discover how social scientists, practitioners as well as researchers, used information. One of the reasons I gave when seeking funding for the research was that nearly all previous studies of information needs and use had been in the natural sciences, and I considered that there was a danger that solutions adopted for science would be applied to the social sciences, without thought for the many differences between the two broad areas of study. Let me summarize some special characteristics of the social sciences.

What Makes the Social Sciences Different?

First, there is no agreement as to what constitutes the social sciences, beyond sociology, political science and economics. Most would include social anthropology, social psychology and management; some would include education, and others history. The common thread is that the discipline is concerned with human beings interacting or acting in groups. The interaction of largely unpredictable beings with other largely unpredictable beings produces great scope for instability and uncertainty. Most of the social sciences are relatively young, and scarcely organized as coherent disciplines.

There is also considerable diversity between different social sciences. Economics, one of the younger social sciences, has in econometrics a sub-discipline that is virtually a branch of mathematics, and might therefore be considered a "hard" science (though it has to be said that most of the data fed into econometric models is very "soft": the superstructure may be meticulously constructed, but the infrastructure is often shifting sand). Some social sciences are soft through-and-through: the probability that two social surveys carried out on the same subject in the same district within a few months of one another will agree at all closely is not high - one has only to look at political polls.

It follows that concepts and terminology are not international, or consistent over time; there is some agreement within certain regions and across similar political systems and cultures, but even then there tends to be a national bias. In consequence, subject control and access are far harder than in the sciences; by comparison, the humanities are far more amenable to control. And unlike the sciences, nearly all social scientists write in their native language (some would say in their own private language); there is no de facto common language. These factors together mean that it is much harder to develop satisfactory international information services.

Because of a relative lack of coherence and consistency in the social sciences, and because the subject matter is very unstable, the penalties for ignorance of previous work in supposedly similar areas are far less than in the pure or applied sciences. And while there are certainly

associations (both visible and invisible) of social scientists, they are not nearly so well organized to speak with one voice. Scientists across the world can and do make their views clear, on information services as on other topics - witness the several congresses that have taken place on information problems and needs in the sciences. The net result of all this is that social scientists do not seem particularly concerned as a body about information services or deficiencies, nor apparently are they organized to say or do much about it.

In any case, the market for information services is small; the total world market is quite large, but, for the reasons given above, international services, where they exist at all, have to be supplemented by national services. Nor is the market a rich one. This perhaps helps to explain why there are so many small indexing and abstracting services, and why almost any social scientist has to search at least three or four to obtain reasonable coverage of a topic. Very few of them do, of course, partly because it is too much trouble, partly because they do not think it matters much if they miss something.

We found out quite a lot from INFROSS about the needs and uses of social scientists in the United Kingdom - not merely researchers, but practitioners of various kinds. This knowledge was supplemented during a second research project, called DISISS (Design of Information Systems in the Social Sciences). A main part of this was a massive bibliometric analysis of citations, before it was possible to do machine analysis on large bodies of computerized data. This had two features that were in those days unique to citation studies, and are still very rare: they included references in books as well as journals, and references in lowly ranked as well as highly ranked journals. The patterns of citation revealed by the different sets of references proved to be quite different; in the light of this, and of the fact that monographs are almost as important as journals in most social sciences, it astonishes me that subsequent social science citation studies still draw confident conclusions from the analysis of references restricted to journals. One finding of our studies was a very heavy dependence of subjects such as sociology on other disciplines; this clearly magnifies the problem of providing services.

What to Do about It?

DISISS was intended to offer some solutions to the information problems of social scientists, and to this end it included some other studies. One of these looked at the size and growth of social science literature, and produced much illumination and some surprises. Another examined coverage and overlap of secondary services in two fields. A third evaluated two information services in social welfare. However, the most interesting for the purposes of this article was a practical experiment concerned with the optimization of current indexing and abstracting tools, e.g., achieving the best balance between frequency of issue and size: people tend not to read issues of indexing services if they are either individually too big or if they are issued too frequently. No work has, to my knowledge, been done in this area before or since. Some interesting and potentially useful conclusions were reached.

Overlapping INFROSS and DISISS, another study took place: a three-year Experimental Information Service in the Social Sciences, aimed at researchers and teachers at Bath and Bristol Universities. This showed that a personal information service given by two persons, themselves both social scientists, was not only greatly appreciated, after some initial cynicism; it achieved a far better information flow than could have been achieved in any other way.

What Was Done about It?

What happened as a result of all this research, which we did our best to disseminate not only in detailed reports but in journal articles? Nothing, except that the studies were widely cited for a long time - too long, since inevitably some of the findings went out of date as the information scene entered a period of dramatic change. (It may be noted that the citation studies attracted especially high numbers of citations; if authors want to be cited, clearly they should write about citations.) The citations were made by academics; but, as said above, the research was intended as a basis for action, especially by producers of secondary tools. Unfortunately, it proved impossible to interest them. They tended to be either rather amateur bodies running shoestring services, which almost certainly did not cover their costs, or big publishers, who were not interested in changing so long as they were making profits; no one seemed especially concerned about giving users better services. The only real chance of change was if new and better services put existing services out of business, but the field was not lucrative enough to attract much competition.

The points I made earlier in this article about the social sciences are still, I believe, valid. However, my fear that social science information services would blindly follow science information services was misplaced: if they had done so, they would be far better than they are now.

Where to Go from Here?

If previous efforts at improvement failed, what can we do now? There are three stages. The first is to make a new diagnosis. The information world has changed radically since INFROSS and DISISS. It is now possible to find all sorts of interesting things on the Web, if one is prepared to risk wasting a lot of time in the process. Some things can be found with far less effort than before; for example, direct access can now be gained to many data sets, including collections of statistics and social survey information. How far can access to this poorly controlled, hit-and-miss mass of

unrefereed information compensate for, or complement, the inadequate miscellany of "organized" services? Does it merely add confusion? Whether we like it or not, the Internet exists, and we need to know what sort of uses social scientists are making of it, and if and how it is changing their information habits. We certainly need to know how their information uses, and their perceptions of their needs, have changed over the 30 years since INFROSS. Uses are not difficult to ascertain, but needs are another matter; we tried in INFROSS to take a step back from uses and ask what research each respondent was involved in, but this took us only so far, and I would now favor the use of "softer" methodologies like focus groups in addition to questionnaires, which still seem to me essential if a broad enough sample is to be obtained. This time the study should, if possible, take place in several countries, using the same methods to make comparison possible. I would also carry out more bibliometric studies, not because they tell us much about either needs nor uses (they don't), but because they reveal a lot about interdisciplinary relationships, and they are now much easier to do than they were 30 years ago.

Then we need to make renewed efforts to see that something is done about whatever problems social scientists prove to have. We could of course just leave them to muddle along, and some might feel they deserve to be so left, since they seem to have done so little to help themselves. But our job as information scientists is not to criticize people for being as they are, but to design services for them. I have never been happy about trying to redesign human beings to fit information services. We might have more success trying to provide access to the Web than we have been in trying to get producers of secondary services to improve them, since, at present anyway, fewer commercial interests are involved.

This is not the first time that a plea has been made for new studies into social science information needs and services. Previous pleas have had no success because the persons doing the pleading - and here I must include myself - were unable for various reasons (mainly pressure of work) to do much themselves, because there were few others who seemed to be interested, and because sources of funds to carry out the necessary research were not found. Let's try again to make sure that information services in the social sciences are no longer the poor relation of those in science and technology.

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Capitalizing on a Past Investment: Why We Need Bibliometric Studies of Social Science Literature Again

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Introduction

The 1970s were an important decade for research into library and information science. Governments around the world, particularly in North America and Western Europe, made funds available for projects at a higher level than in the past. Obtaining research funds was easier in many respects. The funding agencies were willing to examine proposals for investigations which were often of an exploratory nature. At the same time the library and information schools were expanding and developing research programmes backed by their universities and polytechnics. It was also a time when methodology was becoming important.

Project INFROSS investigated the information needs of social scientists. Towards the end of the project, discussions took place between Maurice Line, Michael Brittain, Stephen Roberts and other members of the research team at Bath University and David Nicholas, Maureen Ritchie and Patricia Layzell Ward at the School of Librarianship at the Polytechnic of North London which laid the foundation for collaboration on a project known as DISISS (Design of Information Systems in the Social Sciences). The work was carried out between 1971-1975 and funded by the British Library Research and Development Department and the Polytechnic of North London. The aim of DISISS was to isolate some significant questions about published secondary services – "because they exist in large numbers, they cost in total a great deal to produce, buy and use, they are grossly underused..."[1] The project consisted of a series of sub-studies that examined the literature of the social sciences. Maurice Line has drawn attention to features of social science information that distinguish it from the sciences, this includes instability and imprecision since they are concerned with the behavior of human beings. He considered that there "can be no general consensus, over time or place, on the classification and terminology of the social sciences".[2]

What the investigation produced was a set of reports that examined the nature of the literature of the social sciences in the mid-1970s. The suggestion that lies behind this article is that perhaps it is time to revisit the data collected and capitalize on the investment made in DISISS.

Why Revisit the Data?

In the early 1970s when the project commenced, the professional literature was carrying papers on the information explosion that was taking place at this time when there had been a growth in pure and applied research in science, technology and the social sciences. There was a view that this growth might continue – and so - how could researchers and users of the literature keep up with this continuing flood of publication? Given the level of investment in R&D in all disciplines at this time in the Western world, this was perceived to be

a major problem. At the same time the computer was becoming a useful research tool in the field of library and information science, and Gene Garfield at ISI was producing the *Science Citation Index* and the *Social Science Citation Index*.

Maurice Line, in writing of the future output of social science information, commented that during the course of the project there were the "first real signs ... of the possible effect of the combination of economic crisis and technological advance on an unprecedented scale." He drew attention to the "paperless society" or "electronic journal/book", and commented that it remained to be seen how far-reaching this change would be.[3]

Today we know that, whilst we may still not be working in an entirely paperless society, electronic access has changed dramatically the way in which we can identify and use social science information. At the same time we are also aware of the changes that have taken place within the disciplines that comprise the social sciences. Interest has grown in some fields such as politics, environmental planning, law and management – in others there may have been a decline.

As a profession we need to know what is happening in the environment in which information and library services operate, particularly in the field of publishing. Such information is needed to both provide a service to users, and also for securing the funding to support the services. An awareness of what has happened together with current trends would be a valuable contribution to strategic planning. The DISISS project yielded a snapshot of the literature of the social sciences as it was in the mid-1970s that could be compared with a snapshot of what is happening now, 25 years later. It might answer such questions as:

– Has there has been a decline or growth across the whole social science discipline?
– Has there been decline or growth in the sub-fields?
– Have some new fields emerged; have any died?
– To what extent has the electronic journal replaced the paper-based journal?
– Are the secondary services covering the primary literature as effectively as they did in the 1970s?

Gathering Data 20 Years On

Collecting data in 2000 would be easier and less costly than it was in the 1970s. Just to give an indication of the challenges of the 1970s, SPSS had recently become available and was used for the analysis of part of the data. One problem was that we had limited experience in using SPSS. The sight of the first batch of printout being wheeled in on a trolley gave a first indication of the benefits of being able to easily write a programme that would check all possible variables in relationships between citations. The problem that emerged was of being able to read through all of the printouts ... Another challenge for one of the sub-studies was the need to check copies of social science journals for the total number of pages and number of articles. Willing students beavered away in the basement stacks at the British Library of Political and Economic Science, at one point working by torchlight during the major power cuts that took place at that time.

Today we could take advantage of technological development and be able to gather and analyze the data much more easily, and at a far lower cost.

The Nature of the Data Available for Comparison

In this short article it is only possible to give an indication of the richness of the data collection. Amongst the facts which emerged:

– World production of social science monographs 1961-70: a rise from 66,530 to 106,159;
– Output by country: in 1970 of the world's monograph production the USSR published 18%, followed by West Germany at 13%;
– Output by subject in the UK : in 1970 21% in economics, followed by 14% in modern history;
– Current social science serials: in 1820 there were 22; by 1920 - 694; by 1950 -1806; in 1970 - 3490;
– In 1901-10 148 new titles were created and 5 ceased; in 1961-70 there were 1154 new titles and 134 ceased;
– In 1970 the USA published the highest number of serials – 340, followed by France – 199;
– In 1970 by subject there were 711 serial titles in economics, followed by 270 in political science.
– One example of a sub-study: coverage by secondary services in criminology – 2 primary serials were covered by 6 secondary services; 31 were covered by 3, and 531 were covered by only 1 service;
– The time lag between the publication of a primary journal in criminology and coverage in a secondary service varied between 4 and 27 months, with most intervals being between 8 and 16 months;
– From a careful analysis of citations US titles were more productive of references than British titles;
– Economics, psychology, linguistics and education showed high concentrations of citations within the subject field, while environmental planning, librarianship and political science had a wide scatter;
– The monograph authors most cited by serials were: Lenin, Marx, Engels, Freud, Parsons, Friedman and Pavlov.

The Situation Today

With developments in technology it is now possible for the secondary services to provide a speedy individualized service to subscribers. This has been of great benefit to researchers and practitioners. But there is still a need to examine some of the fundamental questions that DISISS set out to answer. These include:

– How much literature is there to cover?
– How much of this needs to be covered?
– How many services in a field should there be?
– How much overlap is necessary or desirable between service?
– How should subject access be provided – by classification or linguistically?
– How can the key literature of the past be identified?

These are some of the questions that should be answered. One critical question that is of continuing concern to researchers in the social sciences is the coverage of their subject field in languages other than those they have access to; and can read. The language barriers still exist. As nationalism increases across the globe this may grow.

The Benefits to be Gained from Replicating DISISS

It would yield a snapshot that could be compared with a database developed by a project that employed robust methods of data collection and analysis. DISISS took the methodology of bibliometrics and moved a step forward through the use of a careful definition of terminology.

The question of replicating the project would also contribute to research in information and library science, for there has been limited replication of methods to date.

The original project was well documented. Much debate is taking place today concerning the extent to which electronic resources are replacing paper-based journals. More hard information is needed for decision-making. And here there is an investment from which we could capitalize. Is there a wider interest in a new look at social science information sources?

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Evolution of Social Science Information Sources in Asia: The South Korean Case

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Introduction

There are at least three hypotheses that are relevant to understanding the contemporary growth of social scientific data and information sources in Asia. One posits that growth depends on an increase in economic output and associated social life indicators. Another posits a historical legacy of library development with holdings that reference, at least tangentially, social science issues. Yet a third suggests that the growth of social science information sources depends upon government sponsorship of education and research including a strong component in the social sciences.

To some extent all three of these hypotheses interlock in the case of Asia. It is, after all, the case that in China in the early years of the Ching Dynasty library holdings were one of the largest in the world. It is also true that in China and Korea the traditional meritocratic basis for status advancement was through an examination system that placed a premium on education. These historical features were firmly imbedded in traditional cultural values and they have left an abiding legacy that has helped in the growth of modern day social science information sources.

Despite these historical legacies, however, it is modernization in general and improvements in social life that have been crucial for the development of social science research. Consider the following. During the last three decades South Korean per capita GNP rose from a little over USD 640 to over USD 8000. The illiteracy rate dropped from 12% in the mid-1970s to less than 5% in the mid-1990s. Government expenditures on social security doubled from the 1980s to the mid-1990s. Life expectancy rose from 61 years in the mid-1970s to 71 in the mid-1990s while infant mortality dropped from 47 per 1000 live births to 12 during the same period.[1] Is there a qualitative correlation between these growth figures and a greater output of social scientific data and information sources? Given the limited nature of this article, and the fact that much social science data is published in the form of government documents, I will attempt an answer by concentrating on official publications in South Korea.

The Case of South Korea

Historical Antecedents

A 1984 UNESCO study characterized social science research in Asia as emanating from relatively young academic disciplines that were largely imported from the West around the turn of the century. [2] While this characterization may be true as a gross generalization, it is not the case that social science materials were unknown in traditional Korea. In the royal court of King Sejong in the 15th century, the palace (i.e., the government or the state) actively promoted literacy among the general public even to the extent of creating a new Korean

alphabet, *Hangul*. The palace Royal Academy scholars were also responsible for publications on agricultural economics, geographical descriptions of the country, the compilation of legal codes and official histories. Through the Royal Academy (*Chiphyunjon*), a precursor to the numerous government sponsored research institutes that exist in contemporary Korea, the state promoted research in many areas including social science. These historical compilations were critical primary source documents in their day and continue to be so for modern social scientists.

This tradition of government sponsorship of research continues to this date in Korea (as it does in many Asian countries). Hwa asserts that the Singapore Government plays an important, if not crucial role in financing teaching and research in the social sciences.[3] Thailand passed a National Research Council (NRC) Act in 1959; it has been said that since the creation of the NRC there has been an increase in the number of social science research cells attached to government departments and agencies. [4] Although S.P. Agrawal suggests that social science information in India has low governmental priority, it was the Education Ministry of the Government of India that established the National Social Science Documentation Centre. [5]

In South Korea the government has increasingly become a critical stimulant to the production and growth of scientific research as well as social science information sources. In contrast to technical and scientific research areas, however, social science research in Korea occupied initially an unenviable position as an underprivileged and under-funded area of inquiry; the acquisition of specialized knowledge in technical and scientific areas and in industrial know-how had higher priority. This effort rewarded South Korea with a fast growing economy, the results of which have paved the way for the promotion of research on social issues as well as on the ways that scientific and technical developments have impacted social life.

Quantity and Quality of Government Issued Social Science Information Sources

The number of publications of social science materials issued by the South Korean government and by quasi-government organizations, i.e., government-invested enterprises and government-related agencies, has increased significantly. According to the 1997 *Catalog of Government Publications*, the total number of government publications issued in 1996 was 4697; among these over 3000 titles (66%) are classified as social science titles. This is an increase of 6% over 1993 in the number of social science titles published by the government. It is relatively easy to measure the quantity of government issued publications. About 1550 titles were issued in total by government agencies between 1945 to 1965. By contrast, between 1966 and 1970, the number of government publications jumped to more than 5500 titles, almost quadrupling the total output of the previous 20 years. [6]

When South Korea began its economic expansion in the early 1960s, this also marked the acceleration of official publishing by government agencies, not only in terms of quantity but also in terms of quality. For example, it was the 1960 census that embarked on the expansion and transformation of the census from one where only basic demographic data were collected to one where multi-faceted information on socio-economic characteristics were obtained and analyzed utilizing computerized database processing. In 1964 the government also began to review and classify the local administrative districts of the entire country. This was done in order that appropriate data could be collected on each unit. Many government statistics are collected based on these continuing reviews and classifications.[7]

It appears that South Korean government agencies at all levels are rapidly shifting their publications from a print to an electronic format. Many government agencies have an Internet presence, a large number of them with an extensive bilingual homepage (Korean and English). The quality and content of homepages vary from one agency to another, e.g., some carry an extensive publications list with detailed annotations. Examples of government units with homepages are the National History Compilation Committee, the Supreme Court, the National Statistical Office, the National Library and the National Assembly Library. The National Statistical Office has begun to build massive numeric data files that are becoming a critical source for contemporary social science research. The electronic information resources that the Korean government provides on the Internet promises to enhance the quantity and quality of global social science information.

Types of Publications

At the heart of social science information resources are three principal types of publications issued by the executive branch of the government. These are yearly statistical reports, yearbooks and annual reports and white papers, all of which constitute important primary source data for social scientists. Korean government publications are rich in statistical reports. Publication of these reports is frequently mandated by a comprehensive statistical law that requires that each government agency/ministry issue an annual (or quarterly) statistical analysis. Statistical yearbooks (*Tonnggye Yongam*) issued by government ministries are good examples in this category. The title and the text of statistical yearbooks are often bilingual (in Korean and English) and almost always contain international statistics for comparative purposes. These statistical reports are the best sellers among government publications; about 35% of government publications deal with statistical data.[8]

Following a pattern that originated in Great Britain, white papers (*Paekso*) are issued by almost all

ministries. These government reports deal with timely national topics. This form of government report has existed since 1948 when the first government was formed following the end of Japan's colonial domination. Many social, political and economic issues are analyzed by appropriate ministries. Unlike statistical reports, Korean government white papers are almost always written in Korean.

Bibliographic Control and Access Tools

Despite Korea's reputation for having moved from "imitation to innovation" in economic and technical matters, there are few innovations in the repackaging of government information for easy public access. Providing access to government publications through specialized catalogs and indexes is largely done by the issuing agency itself. Two of the most prolific of these agencies are the National Statistical Office and the Ministry of Unification. The National Library and the National Assembly Library are actively involved in the dissemination of social science information through their digital library projects.

The two main access tools for South Korean government publications are the *Catalog of Government Publications* issued annually by the Government Publishing Office, and the section on government publications in the *Korean National Bibliography* issued by the National Library.

Distribution and Dissemination

While the number of government publications issued by various agencies has increased dramatically in recent years (the number actually doubled in the last five years from 2680 titles issued in 1992 to 4697 titles in 1997), no centralized or systematic distribution method has yet been adopted, particularly one designed to reach large numbers of the public. The majority of government publications, while compiled and edited by an issuing government agency, are invariably printed by private printers. They are distributed either by the issuing agency itself or, if priced, through designated sales centres.

The National Assembly Library, the National Library, the National Archives and Records Service and the Library of the Government Publishing Office are currently legal depository libraries. All government agencies, including government-invested enterprises and government-related agencies, whether they are national or local, are required, by law, to place their publications in depository libraries.

Although the word *Nappon Tosohkwan* is translated as depository library, it has a very different meaning conceptually from the term "depository library" as it is used for government publications in America. In the United States US federal government agency publications are deposited in designated libraries by the government for the purpose of public distribution and public access. In the Korean sense of "depository library" the "deposit" is made by the publishers (including government agencies) in the designated libraries (i.e., government libraries) for the purpose of preserving the cultural heritage, for copyright protection, for international exchange and, lastly, for public access.

The legal depository system was first introduced as part of the 1963 Library Laws. Prior to this in 1961, all publishers were required to submit two copies of their publications to the Ministry of Education which then forwarded them to the National Library. The 1963 National Assembly Law No. 1424 requires all government agencies to deposit three copies of their publications in the National Assembly Library. Since 1991 three copies of publications produced by the executive branch of the government, by city/provincial governments and by city/provincial Educational Commissions have also been deposited with the Government Archives and Records Service. Since 1996 three copies of the same category of materials have also been deposited with the Library of the Government Publishing Office Library.

It has long been recognized, however, that many government agencies fail to comply with these legal obligations. Moreover, there has been no effective way in general to enforce the deposit system law. Some argue that initially the legal deposit system was viewed as "censorship" or "thought police" as it was at times practiced during the Japanese colonial period or under previous autocratic governments. Especially under Japanese rule prior submission of a manuscript to the colonial government was required for official approval.[9]

Conclusion

Despite the fact that there is an apparent correlation between economic growth and the development of social science information sources, it is clear that this is not the sole explanation. For many years following World War II, Korea labored under various forms of authoritarian government. Democracy as it is understood in the West did not truly arrive until 1992. Prior to that time, social science information sources disseminated by the government were frequently viewed as propagandistic disinformation. Interestingly, the advent of democracy has witnessed a marked upsurge in the quantity and quality of government publications that deal with social science issues. Nothing speaks more eloquently to the importance of an open political environment as a stimulant to the production, dissemination and use of social science research information sources.

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Structural and Multilingual Approaches to Subject Access on the Web

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Introduction

The rapid growth of Web resources has presented unprecedented challenges to those responsible for organizing, manag-

ing, and providing access to them. Among the many challenges in discovering and mining useful resources on the World Wide Web are the sheer volume of what is available and language barriers. Mechanisms that can organize Web resources for more efficient and effective retrieval are urgently needed. There has been a renewed interest in using subject categorization or hierarchical structures to organize directories for more efficient knowledge discovery and retrieval. And, there is an equally obvious and pressing need for programmes that can accommodate multiple languages. To serve multilingual and multicultural populations all over the world, many search engines on the Web have also developed new services such as regional editions, search-by-language and search-by-region features.

Structural Approaches to Organizing Web Resources

Many subject categorizing schemes have been developed to organize and manage Web resources. They are known by various names such as subject guides, Web guides, subject categories, subject directories, subject hierarchies, pathfinders, and so on. What many of these systems have in common is that they manifest the traditional classification principles of hierarchical structure, domain partition, subordination of the specific to the general, and array of related subjects. A survey of the hierarchical structures now functioning as Web organizers shows considerable variation in complexity and sophistication, in subject scope and depth of coverage, and in the number of items they cover. They also vary in the classificational patterns on which they are based. In some cases attempts have been made to adapt existing schemes such as the Dewey Decimal Classification (DDC), the Library of Congress Classification (LCC), and the Universal Decimal Classification (UDC) to the Web environment. Diane Vizine-Goetz, in her research, has shown how, with appropriate improvements, such schemes may be used to enhance Web subject retrieval.[1]

Systems that use hierarchical structure to organize Web resources include:

- subject guides devised by popular Web search services such as Yahoo!, Lycos, Infoseek, Excite, and others;
- schemes devised by individual libraries to facilitate access to the Web resources they have selected and included in their local systems; and,
- Web organizers and directories based on existing schemes, for instance, OCLC's Netfirst based on DDC, CyberStacks and Scout Report Signpost based on LCC.

Using hierarchical or classification-based formats to organize Web resources could have important advantages, among which, as Traugott Koch and Michael Day have pointed out, are improved subject browsing facilities, potential multilingual access and improved interoperability with other services.[2] A hierarchical structure can be thought of as a conceptual map - perhaps of the entire universe of knowledge or perhaps of a particular domain therein. Such a map sorts informational content into related groups (and their subgroups) and thus allows searchers to confine their approaches to defined areas where similar material is concentrated.

Knowledge viewed through an organized structure is easier to perceive and to comprehend once perceived. In subject access, therefore, a hierarchical structural presents a logical path to the desired objects. Above all, it improves precision by first defining and narrowing the domain for searching. This advantage is evident even in hierarchical structures that offer only a broad level of categorization. The reason for the benefit may be that hierarchy, even at a broad level, exemplifies two functions of traditional classification: collocation (inclusion) and partition (exclusion). While collocation is predicated on inclusion, which is a fundamental property of classification, partition captures another fundamental property, exclusion. It is how well a hierarchical structure fulfils these two functions that determines its potential helpfulness in a search environment. Inclusion collocates objects and ideas that are alike. On the other hand, in a vast information domain, it is just as important to exclude information not wanted as to include what is being sought. Exclusion can be accomplished by dividing a large amount of information into smaller parts as a means of isolating the part that is most likely to be relevant.[3] The larger the information domain, the more important it is to find an effective and efficient way to define narrower domains for searching. One of the major causes of false hits in retrieval is homographs, that is, words that look the same but have different meanings. The advantage of searching within a specific domain is that terms are often ambiguous across several disciplines, but seldom have multiple meanings within a particular discipline or subject domain.

There are advantages of using classification in the Web environment where different conditions from those of the print environment prevail. Consider that, in traditional systems, subject data (including classification numbers and indexing terms) are typically *attached to* their sources, either on documents themselves (call numbers on spines) or in surrogates (cataloguing records or other metadata records such as the Dublin Core). In contrast, in the Web environment, subject data often are *separate from, or reside outside* the resources themselves. Instead, such information can be stored in directories or other types of Web interfaces that link subject data to the resources but do not affect them otherwise; individual links are made from the subject provisions in the Web organizer to the resources through the URLs. The advantage of "linking-to" rather than "storing-with" is flexibility. With a linked system, if a classification or other subject organization scheme is revised, it is only the links that may

have to be changed: the Web pages and sites are not affected in any way. Re- classification is not a problem. Furthermore, the scope and the depth of any given system can be easily adjusted on the basis of literary warrant, whether the warrant be popular, consumer-oriented, or academic/scientific. For example, common categories found in popular subject guides include automobiles, entertainment, family, sport, and travel, while the most commonly found categories in academic Web guides are humanities, social sciences, science, technology, and law. Furthermore, the Web guides can also be easily adapted to local or regional needs, or modified for the needs of a specific clientele.

In a way, the use of hierarchical or classificatory structure on the Web is still relatively new. As Web resources continue to grow, one may expect corresponding growth and refinement in ways to organize them. At this point in time, it is perhaps not too early to consider some of the functional requirements of Web organizers. The desirable characteristics may be summarized as follows; a scheme designed for organizing Web resources should be:

– intuitive, logical, and easy to use, with hierarchies and cross-references clearly displayed and with current and expressive captions;
– flexible, adjustable, and expandable, to reflect rapidly changing and diverse environments;
– useful in a wide range of settings, and applicable over a wide range of the number of sites to which it applies; and,
– relatively easy to maintain and to revise.

The first question in respect to Web subject organization is whether to adapt a current classification scheme or whether to begin afresh. It is apparent from the current situation that those who design and build Web organizers lean toward devices that are based on their own understanding of the needs and search habits of their users. What is at issue here is the difference between two opposing methods for categorizing subject content. Familiar classification schemes, which have a long history, typically represent a top-down approach, starting with the whole universe or an entire discipline of knowledge, determining major classes on theoretical grounds, and subdividing them hierarchically into increasingly specific levels. This approach has generally been used whether the resulting scheme is custom-tailored for specialists or designed with a large and diverse population in mind. The alternative approach is a bottom-up operation that begins with specific terms or items (Web pages in this context) which are then grouped and organized, first into a microcosm, finally, as coverage becomes fuller, into a macrocosm. In the Web environment, where most subject guides have also been designed with the general public in mind, it seems that many recent efforts to categorize Web resources are taking the latter, i.e., bottom-up, approach.

The question of which approach is likely to prove more effective in the Web environment does not have a definite answer. Either approach leads to a system that embodies domain partition, general/specific delineation, and array of related topics - features that are considered important for effective retrieval from a very large resource collection. What seems most likely is that time will show that top-down systems are especially suitable for highly structured established fields; bottom-up systems, on the other hand, may be particularly well suited to the mass of varied and fluctuating material that makes up so much of the Web. It seems likely, also, that the bottom-up approach works especially well for personalized or customized Web organizers, several of which have emerged in recent months. An example is Northernlight's "Custom Search Folders", a device which categorizes the results of particular searches into broad categories.

Multilingual Approaches to Subject Access

Using structural approach to organize Web resources has brought the strengths of classification to the Web subject directories and search engines. Nevertheless, the question of how a classificatory scheme designed for organizing Web resources will be able to adapt to technical and cultural changes in the context of multiple languages lingers on. In the past few years, a majority of Web search engines (including subject directories) have been geared toward indexing Web pages mainly in Western European languages. Almost all of their service interfaces were in English and often highlighted with news or other events of interest to a US audience. This is partially due to the clinging to the classic hope that advanced technologies supported Western languages and all users were assumed to be able to use them to produce and access resources in these languages. As Internet connections become all-pervasive and intranets began to enter the corporate network, and as the Internet technologies advanced to support many other languages all over the world, the scope of available Web resources has increased radically. To solve the problem of users having to deal with languages both known and unknown to them, an effective mechanism of trans-lingualism is needed. Multilingual processing has emerged as a key issue in the evolution of search engine technologies. In early 1998, a quiet competition of globalization and localization among search engines occurred concurrently with the development of Internet services worldwide.

Multilingual-Oriented Services of Major Search Engines

Web search engines are finally catching on: to serve multilingual and multicultural populations all over the world, major search engines, such as AltaVista, Excite, HotBot, Infoseek, Northern Light, Yahoo!, etc., have developed new services functioning as regional search guides. Since late 1997, several patterns have evolved.

– *Domain Filtering.* The easiest way to create a regional guide with regional content is to filter by country domain. Each country

has its own top-level domain on the Internet, say, uk for the United Kingdom. Presently typical domain filtering services are Global Excite (covering 10 countries), Infoseek's GO International (covering 12 countries), and Lycos in 11 countries. Search results are usually taken from the main listings but filtered by domain.

– *Domain Detection.* In this case, the search engine detects the country where a particular user comes from and presents a customized front page that is usually tailored with some specific information.

– *Mirror Sites.* Mirror sites began to appear when major search engines set up sites physically located outside the United States. They are generally more responsive, since they are isolated from the heavy US traffic and the problems of crossing oceans and long distances. Some mirror sites allow the search interface to use a language other than English.

– *Language Specific Search.* Some services are able to transcend national boundaries for countries that share a common language. For example, AltaVista, Northern Light, and Infoseek all enable searching the documents in particular languages. This is different from domain filtering in which searches are limited within a country domain code.

– *Multilingual Search.* Several search engines now offer searching in "any languages", though the number of languages they really could cover varies and is often limited, mostly excluding East Asian, Cyrillic, Greek, Hebrew and Arabic. Theoretically, cross-lingual searches would require that the search engine translate whatever page it finds into Unicode and be able to identify the dominant language of a page when it is indexed.

– *Regional Interface.* Creating a regional interface can be as simple as presenting the same search engine's look-and-feel in the appropriate language for a particular country. For example, all of the instructional text might be changed to French to create a version for France. Changing the interface does not affect the results. Unless more modifications have been made, a search on a regional edition will provide the same results as using the main service. In general, there are various ways to provide this feature. In the case of subject directories, users sometimes can see a subject directory completely translated from English, with no change in the content or the order of categories. Occasionally, users may be presented with a bilingual display of the directory, for example, a subject directory in both English and Japanese. However, to display a text-based Japanese directory would require that a local character code set be loaded in a client site machine. Therefore some directories provide an image/graphic-based display in order to avoid such a requirement. Regional interfaces may also have different content focuses and displays; we will discuss this in the next section.

– *Localized Subject Directories.* Instead of having a set of regional interfaces which might be the products of transliterated or translated versions of a global or US version, localized subject directories provide tailored versions which reflect local interests. This is achieved by using local languages for the whole directory, defining and naming categories based on local convention, presenting categories according to local interests, and including categories which assemble local focuses. World Yahoo!s ' localized directories cover 19 regions/countries in the Americas, Pacific Rim, and Europe. For example, Yahoo! Chinese gives users both simplified and un-simplified Chinese version choices. It eventually leads a user into either Yahoo! China or Yahoo! Taiwan, each with different focuses and accompanying news from China or Taiwan. Yahoo! HongKong, on the other hand, allows switches between its English and Chinese versions. So does the Yahoo! Canada for its English and French versions. Even for English-speaking regions/countries, at least six localized Yahoo! directories exist: USA, Canada, UK&Ireland, Singapore, Hong Kong, and Australia&NZ.

Web Subject Directories in a Multilingual Environment

Issues to be considered in devising a useful Web organizer range widely from scope of subject matter and depth of hierarchy, category and facet definitions, logical structure, to citation order, cross references, alphabetical index, terminology of captions, and notation. Among the well-known search engines and Web subject directories, Yahoo! is considered the pioneer of Web organizers, and has successfully applied classificatory structure in its entire service. Since 1998, other major search engines also adopted subject directory methodology, using their "folk" classification schemes. Characteristics related to the multilingual services discussed in the following sections are based on a number of services, especially World Yahoo! subject directories. Most of the examples were collected on 12 February 1999. There is no doubt that many of the phenomena found in the following sections also exist in other search engines' services, such as the subject directories of Northern Light, AltaVista, HotBot, Excite, and Infoseek.

Alphabetical Arrangement of Categories

World Yahoo!s offer about 20 versions of its unique directory for various countries and regions all over the world. The directory divides Web resources into 14 main categories and has virtually included all subject matter. Because no notation is used in the Yahoo! classification structure, alphabetical order becomes the natural and only viable arrangement of all categories. No systematic system/schedule or logical order of the cate-

gories is applied. A complete browsing process is always needed when locating a particular topic on Yahoo!. This unavoidably causes an inconsistency of orders in non-English versions of Yahoo! directories. In other words, although all regional directories may have the same 14 major categories, other versions, say the Spanish, French, Italian, or German versions, would have different orders for the categories, according to their own alphabets. For non-Roman languages such as Chinese, different arrangement systems, neither alphabetical nor systematic, are used.

Implementation of the Principle of Literary Warrant

Web subject directories basically follow the principle of literary warrant. The scope and depth of hierarchies in a Web directory often depend on the amount of Web source information available in a particular area; the basis of literary warrant could be popular, consumer-oriented, or academic/scientific. Yahoo!, for example, may divide sub- categories of a particular category into as few as three hierarchical levels (e.g., Arts: Design Arts: Color Theory) or as many as nine levels (e.g., Business and Economy: Companies: Computers: Software: Internet: World Wide Web: HTML Editors: MS Windows: HTML Assistant). The principle of literary warrant in the basic classificatory scheme and the Web site creators' understanding of their sites' functions (when they submit URLs and suggest categories for their sites) accordingly result in different choices regarding the inclusion or exclusion of subordinates within a subject area. It is very common to see variations in terms of the depth of hierarchies and number of subordinate categories in various regional directories, because they are determined by the practical situation of Web resources at that region. One such example can be found in the "Religions: Faiths and Practices" in the following English-based directories, seen below in a descending order:

– *Yahoo*! UK&Ireland - UK only: Atheism, Bahá'í Faith, Buddhism, Christianity, Hinduism, Humanism, Islam, Jainism, Judaism, Meditation, Monasticism, Mysticism, New Age, Paganism, Scientology, Shamanism, Spiritualism, Unitarian- Universalism.
– *Yahoo*! Canada: Bahá'í Faith, Buddhism, Christianity, Islam, Judaism, Messianic Judaism, Mysticism, New Age, Paganism, Scientology, Sikhism, Spiritualism.
– *Yahoo*! Australia & NZ - Australia only: Atheism, Baha'i Faith, Buddhism, Christianity, Gnosis, Hinduism, Islam, Judaism, Meditation, Mysticism, New Age, Paganism, Satanism, Spiritism.
– *Yahoo*! Australia & NZ - New Zealand only: Bahá'í Faith, Buddhism, Christianity, Judaism, Meditation, Mysticism, Spiritualism
– *Yahoo*! Singapore: Buddhism, Christianity, Hinduism, Islam, Sikhism.
– *Yahoo*! UK&Ireland -Ireland Only: Christianity, Mysticism, Paganism.
– *Yahoo*! HongKong (English version): Christianity, Company. (Other listed Web sites that are not covered in any categories include Buddhism and Islam.)

The religions example is merely one of many such cases in World Yahoo!s services. Subject areas relate to culture, society, political and legal systems, business, health, etc., represent the most dynamic treatment guided by the principle of literary warrant.

Flexibility in Reflecting Local Interests

While trying to keep a unique and standardized classification structure, Web subject directories have also shown many possible ways to reflect local interests.

First of all, a particular main category may be presented in a significant position when needed. Usually, all main categories are displayed according to the alphabetical order instead of a logical order. However, during the World Cup period, Yahoo!France unsurprisingly moved the Sports category to the forefront, consequently World Cup was in a very significant location.

Second, subordinates displayed under each main category differ from country to country and from time to time. Note the differences in displayed subordinates of Arts & Humanities in the following figure:

Yahoo! (USA or World):
Arts & Humanities
Literature, Photography...

Yahoo! Canada; Yahoo!HK:
Arts & Humanities
Fashion, Photography,
Literature ...

Yahoo! Australia&NZ:
Arts and Humanities
Artists, Photography,
Literature...

Yahoo! France:
Art et culture
Littérature, Cinéma,
Musique, Musées

As illustrated by this example, under the main category Arts and Humanities, regional directories prioritized subordinates to be displayed in significant places. These subordinates were chosen from dozens of subordinates in a hierarchy. It is important to note that the subordinates listed under the main categories may not be their immediate subordinates. For example, in the Yahoo! classification (English version), Fashion (third level in the hierarchy) is listed as a subordinate of Design Arts (second level in hierarchy) rather than one under Arts (first level in the hierarchy). The same situation applies to some of the other subordinates listed here, such as Literature and Photography. The phenomenon of giving priority to these "grandchildren"-level subordinators reflects an emphasis of local interests. It also indicates the flexibility that hierarchical levels and "belonging" relationships can break down when the perceived importance of a subject/topic overrides logical principles in a classification structure.

The treatment of names/captions of a category illustrates another recognizable phenomenon. The following

example shows the subordinates displayed under Business and Economy:

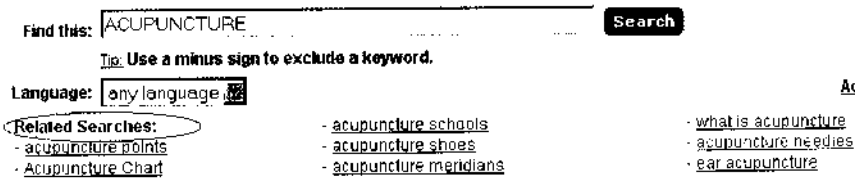
Yahoo! (USA or World):
Business & Economy
Companies, Finance, J
Jobs...
Yahoo! UK&Ireland:
Business & Economy
Companies, Investments,
Taxes...
Yahoo! Australia&NZ:
Business and Economy
Companies, Investing,
Employment...
Yahoo! Canada, *Yahoo!* HK,
Yahoo! Singapore:
Business & Economy
Companies, Jobs,
Investments ...

This example provides additional evidences of efforts to reflect local interests, as discussed in the previous paragraph. It shows how names/captions are treated. In the formal presentation of the category Business & Economy, "Employment" instead of "Jobs" is used, and "Finance and Investment" instead of "Finance" or "Investing" is used. An examination of the directory yields similar examples. This means that the list of selected subordinates may not necessarily carry their "official" name or captions. In this respect, the classificatory structure of Yahoo! does not resemble a standard classification scheme.

Employing Cross-Classification through Hyperlinks

There is also a design upheaval going on at the high end of the search feature spectrum. Many cross classification treatments have been implemented through various ways, fully benefiting from the advantages brought by a hyperlinked environment.

Several search engines provide a related searches feature that is designed to help users narrow in on what they are looking for. For example, when searching "acupuncture" for all language Webpages, AltaVista first displays a group of sub-categories pointing to a set of more focused searches:



[Figure 1. Subcategories of Acupuncture in AltaVista]

HotBot's "Related Searches", Infoseek's "Similar Searches", and Excite's "Related Searches" are all similar to AltaVista's "Related Searches". In addition, Excite can display a box containing words, not searches, which appear to be related to a query. However, this wonderful feature is currently limited by the language processing functions of particular plug-in software or browsers, especially when searching in East Asian languages. The related concepts are also limited within the expression of predefined clusters of words and phrases. If the user happens to use a word or phrase that does not match the pre-defined ones, no suggested related searches will be shown. Phrase searching and stemming supplement related searches as well. They will be discussed in the next section.

Results clustering is another feature that enables related searches. Almost all popular search engines have employed this idea. In order to prevent duplicate listing of Web sites that came from the same source, clustering allows only one page per site to be represented in the top results. But this may also eliminate relevant resources contained under the same Web site. A solution for this problem can be found through Infoseek's "Ungroup results" at the top of the Web search results section, AltaVista's "More pages from this site," and Northern Light's "More results from this site" links. Since the links are affiliated with particular Web sites, it does not matter what languages the original sites are in.

While using cross classification, Web subject directories always keep their flexibility and follow the principle of literary warrant. For example, "Taxes" had multiple postings under 93 categories when searched in all Yahoo!, and under 122 categories when searched in Canada only sites, five in UK only, two in Australia only, one in Singapore only, and zero in HongKong only. Whether "Taxes" is a topic of important local interest can be seen by examining the listings under main categories. In the above example, "Taxes" was given a significant place under the Business & Economy of the Yahoo! UK&Ireland directory. It also appears under the category Government in the USA-oriented Yahoo! directory, together with Military, Politics, and Law, which indicates the importance of this issue among current US government activities.

Language-Dependent Search Features and Beyond

As more and more advanced features emerged, multilingual problems encountered by the data processing software have heavily influenced the comprehension and extension of search engines' worldwide services. Unlike Yahoo!, which accepts submissions by Webpage creators and has a staff to evaluate the descriptions of Web sites manually, many search engines employ a language-dependent automatic treatment of Web sites to rank or cluster resources based on meta tags (such as subject terms, keywords, description tags in the <HEAD> element), page titles, and word frequencies in a page. To rely on automatic weighting and clustering methods in the non-English environment is not problem-free. Non-English Webpages may supply metadata and titles in English. The search and display based on these elements will result in non-English documents' being mixed with English documents. In most cases, without installing the character code sets, a Web browser will not be able to read, say, East Asian characters

coded according to a local standard. Therefore, such a display of mixed languages could waste a user's time since no content of those links could be read or understood. Or, it could result in the browser automatically downloading character sets that the user does not want or is unable to use.

Relying on word frequency as a major parameter in the automatic content identifying and classifying process has some fundamental language-related shortcomings. AltaVista previously had a "Refine" feature which seemed to have used automatic clustering theory based on word co-occurrence. By analyzing words that co-occur with the searched words in a document, documents were automatically clustered. The results were displayed through a list showing terms grouped according to co-occurrence count, or through a map visualizing term relationships. This was a wonderful device, which enabled the user to further refine a search strategy by including or excluding particular groups of words so that a higher precision of search could be achieved. However, this feature was limited to documents in English and a few other Western languages. For instance, for the Chinese language, although AltaVista allowed language-specific searches, it only applied to basic, simple queries, not to the next "refine" step. It should be noted that this feature no longer exists.

Additional features that function in "related searches" are phrase searching and stemming. Both AltaVista and Google make use of semi-automatic phrase searching. The software extracts phrases from the terms of a query by checking against a huge dictionary of common phrases. As a search progresses, it checks the dictionary to see if the search request contains any phrases that it recognizes. If so, then it will perform a phrase search automatically. This can be helpful, because a phrase search can often yield more relevant results than an ordinary search. Stemming is the ability for a search engine to search for variations of a word based on its stem. Infoseek, Lycos, and Northern Light all have a stemming feature by default. For example, entering "swim" might also find "swims" or "swimming", depending on the search engine. HotBot allows search for grammatical variation, for example, searching for "thought" will automatically extends to search "thinking" and "think". The implementation of both of these features requires language-by-language treatment, which could involve complicated processes.

Northern Light provides a wonderful feature known as "Custom Search Folders" for refining search strategies. The service claims that its folders are not pre-set, one-size-fits-all, like other Web directories. Rather, every time one performs a search on Northern Light, it creates a series of "Custom Search Folders" based on the individual search. A user can then select the subjects, types, sources, and languages he wants to explore. Based on the number of documents in each folder and their relevance to a query, the search engine determines and suggests which "Custom Search Folders" will be most helpful to a user at each step. Nevertheless, only five Western languages are served with this excellent feature at this moment.

The road towards a fully functional cross-lingual subject access is both sophisticated and promising. Many other technical issues as well as social and cultural issues need to be addressed as well; these include character encoding support, user interface linguistic translation, support of culture-specific data formats (date, currency, etc.), user interface graphical modification (color, images), foreign products support (e.g., databases), and operating system compatibility.

Knowledge Class: A Research Project

In addition to subject categories and multilingual interfaces designed for the general user, there are also efforts to tailor to the needs of individual users. The following section reports on a research project on developing a device for personalized knowledge organization for access to Web resources.

We have been exploring the possibility of combining existing methods of knowledge organization with advanced Web technology to create an easy-to-use framework for subject access to Web resources. We believe that:

- a knowledge structure can be built on principles of classification and bibliographical organization;
- the knowledge structure could be seamlessly integrated with search engines for access to Web resources;
- an easy-to-use graphical interface could be constructed to support user interactions not only with the organizing structure but with the relevant resources discovered and retrieved through search engines; and,
- multilingual support can be tightly coupled with knowledge structures to support subject access. Based on these premises, we have created and have been testing a device, called "Knowledge Class", designed for customizing knowledge organization and access, to supplement and complement existing structural and multilingual approaches to Web resources.

Knowledge Class

Knowledge Class contains two basic components: an organizing framework and an interface for access to and retrieval of Web resources. The organizing framework is a classified mini-thesaurus, consisting of a hierarchically structured collection of terms on a specific topic or a particular discipline of interest or concern to an individual user. The terms may be those gathered from existing thesauri or natural language terms based on one's own knowledge or garnered from previous searches. The hierarchical structure may be a branch from an existing classification scheme, or built from bottom up by categorizing a collection of terms. Its emphasis is on the structure of knowledge and

the semantic relationships among terms, topics, branches of subject areas, etc. The interface serves as an interactive mechanism between the user and the terms in the organized framework as well as between the user and Web resources. Through this device, the user can initiate searches by selecting the display terms or by using pre-stored search strategies which often contain synonyms (such as "stock options" and "put-and-call" if the domain of the knowledge class is investment). The user can also connect to specific sites previously discovered by clicking on links with pre-stored URLs.

Objectives of Knowledge Class

In Knowledge Class, we try to recapture some of the advantages of traditional methods for efficient and effective information storage and retrieval and apply them to the Web environment. Specifically, three aspects are considered:

– classification principles are adopted to organize information and to display subject relationships;
– controlled vocabulary features, particularly the control of synonyms and homographs, are incorporated for the purpose of improving recall and precision; and,
– search strategies are formulated and pre-stored for the purpose of optimizing search results and current awareness.

By implementing these three aspects, we hope to take information service one step further, beyond what has been available so far. We want to help individual users to organize concepts and terms on a specific subject or topic related to their interests. We want to make it easy for them to browse subject terms, to explore relationships among subject terms, to add synonyms or qualifiers for subject terms, and to store specific search strategies with the subject terms. In other words, Knowledge Class places users in control of how they want to access Web resources through subject structures they prefer. In online retrieval, a great deal of emphasis has been put on retrieval results, and rightly so. But, after retrieval, there is also the need for organizing related information and, in a sense, "storing" it for future use and re-use. Knowledge Class also provides the means for re-visiting the sites and retracing the steps used to find the resources in the first place.

The Design of Knowledge Class

An advantage of conducting research on the Web is that prototype systems can be designed and tested incrementally in the real environment. We started with simple HTML coding to experiment with the idea of Knowledge Class as we initially envisioned it. During implementation and testing, we continuously revised the functions of Knowledge Class, and added new features to it. As we learned more and understood more about its performance, we began to implement it in more sophisticated and robust system languages such as JavaScript and Java. It is this learning-by-doing process that has helped the evolution of Knowledge Class.

Design Principles

From the very beginning, we set up several goals for the design of Knowledge Class. The project started with a search for a device or a system that would provide an optimal balance between automatic and manual indexing in building the organizing frame of Knowledge Class. Our first design principle was to maximize the benefits of both manual and automatic indexing.

Secondly, we wanted to design an easy-to-use interface for Knowledge Class. The system should be usable and useful to a broad range of users. Librarians and information specialists may want to create knowledge classes for their clients. End-users may want to use Knowledge Class to replace simple bookmarking functions of browsers. School teachers may use knowledge classes to cover topics they teach, and students may use them to explore class topics and to expand their knowledge by adding more search terms to the knowledge classes and linking them to Web resources. We want all these users to be able to use the system with a minimal learning curve.

Thirdly, we want users to be free from having to learn detailed syntax of query construction, to be free from memorizing each search engine's homepage, and to be free from having to construct complex search strategies. While Knowledge Class provides a mini-thesaurus for users, what makes it really useful is its connection to the search engines. The system should do as much work behind the scene as possible. It should connect to search engines directly, add synonyms automatically to search queries, and provide different search strategies for different terms. Most of all, the system should make all these transparent to users so that they can focus on semantics and the content of the topics when they use Knowledge Class.

Iterative Design Process

The design of Knowledge Class went through three stages. In the first stage, a basic frame was designed in HTML to include four windows (Figure 2). The first window displays all the first-level branches of a knowledge class (the top right window). The second window is for individual branches in an expandable/contractible tree structure (the top left window); only one branch is shown at a time. The third window (the bottom right window) is the main window for displaying search results. The fourth window (the bottom left window) is for displaying and switching search engines. The four windows are on one HTML page and can be easily loaded onto Web browsers.

In the second stage, we worked with a group of library science students at the University of Kentucky. Each student developed a knowledge class using the basic framework we provided. During this stage, we found that different search strategies needed to be developed for different types of searches. For example, some of the terms need to be searched as indi-

[Figure 2. An example of Knowledge Class]

vidual words; others would be much better searched as a phrase, and still others need to be searched with additional contextual terms taken from higher levels in the hierarchy of the knowledge class. Through many trials and tests, a coding system was developed to facilitate assignment of a specific search strategy to each term. An entry in a knowledge class typically looks like:

--, mutual funds, mutual-funds Investment-trusts Unit-trusts, http://www.brill.com, 1

There are five parts in this entry, each separated by a comma. The first, the number of dashes indicates the hierarchical level of this term. The second is the display term (what will be shown on the tree structure). The third is the search terms; it can include many terms that are synonymous or related to the display term. The fourth is a direct link; if it is present, a "link" icon is displayed to allow the user to click on it to go directly to the page. The final number in the entry is the coded search strategy; here the number 1 indicates that the class scope term Investment (this example is an entry in the knowledge class "Investment") is to be added automatically to the search terms. The complete list of coded search strategies is discussed in Lin and Chan. [3]

In the third stage, we further improved the design by implementing a Java version of Knowledge Class (Figure 3). In this version, window structures were redesigned to make it easier to switch from one branch to another without reloading the entire page. Taking advantage of Java's graphical power, we placed in one succinct frame what used to be scattered in three separated windows: all branches in a knowledge class, tree-structures for each branch, and search engines of Knowledge Class. With the saved screen space we were able to add another level to the display - a list of all the knowledge classes we have created thus far (on the top right window in figure 3).

Another major improvement in this version is the separation of programming files and data files. In the earlier versions, JavaScript and mini-thesaurus entries had to be included on the same HTML page, making it difficult for the user to modify or change the mini-thesaurus without a good understanding of JavaScript. With Java, the programming part is completely compiled and separated from mini-thesaurus data. The user can create, add or modify any content and structure in the data file without any knowledge of the programmes.

Multilingual Supports

While we were designing the data structure for Knowledge Class, we found another benefit in separating display terms from search terms. Our original consideration was to make the connection to search engines more flexible and make query construction easier. We found that this feature became especially useful in developing multilingual knowledge classes.

While constructing a knowledge class on Wales, one of our students developed a bilingual classified mini-thesaurus with terms in both English and Welsh. For pages dis-

[Figure 3. Knowledge Class implemented in Java]

[Figure 4. The Knowledge Class (the same as in figure 2) in Chinese]

playing Welsh terms, she wanted the searches to be conducted in both languages. With the separation of display terms and search terms, this is easy to implement - she simply included both English and Welsh terms in the knowledge class, and the search engines would then search Web pages in both languages. Our testing indicated that this is a very effective approach to providing multilingual support in Knowledge Class.

Figure 3, taken from a knowledge class on Complementary & Alternative Medicine (CAM), shows the part for Chinese Medicine in Chinese. We developed this branch in both English and Chinese (GB coded), and provided links to switch from one to the other. In the Chinese version, each search term includes both English and Chinese equivalents. Thus, for search engines that accept Chinese GB coding, search results will include both English pages and Chinese pages. We found this knowledge class to be particularly helpful for researchers who have limited knowledge of a particular language but wish to access materials in that language. For example, American researchers in traditional Chinese Medicine typically know some Chinese, but they may not feel comfortable enough to browse in Chinese or to enter search queries in Chinese. Using this knowledge class, they can browse in the English version and then switch to the Chinese version for retrieval, or they can click on the English terms and still be able to retrieve relevance resources in Chinese. This feature makes multilingual access to Web resources both possible and efficient.

Future Developments

In a widely cited paper published in *Scientific American*, [4] Clifford Lynch suggests: "Combining the skills of the librarian and the computer scientist may help organize the anarchy of the Internet." In this article, we provide a specific example to show how this may be achieved. Knowledge Class is created with theories and methods that have been used by library and information professionals over the last century. It is supported by recent Web technology. It can be used by information professionals who need to customize Web resources on specific subject domains for their clients. It should also be helpful as a fundamental building block for the Web to provide better structural and multilingual access. As we outlined, for effective retrieval, Web resources need to be organized in terms of "information units", not by individual physical pages. It is analogous to cataloguing in libraries: for the sake of manageability and efficiency we catalogue at monograph or journal levels, not at the individual chapter or article level. We are building knowledge classes to become such information units. In the future, a "mega" search engine will only need to index at the level of these "information units". With this device, users will first find relevant information units and then, from these units, gain access to individual Web pages.

Knowledge Class is an ongoing project; many more features will continue to be developed and implemented, including better directory structures, more flexible multilingual support, and more "intelligent" search strategies, etc. Plans of continuing development in the near future include:

– We hope to enlist more people to create knowledge classes on a wide variety of topics. We will provide free software to encourage cooperation. We particularly hope to involve more information professionals, and to have librarians, information specialists, library school students and faculty members participate in the creation of knowledge classes. When more people are involved, an advisory committee could then be formed to guide and review the knowledge class creation process and to ensure the quality of knowledge classes in the collection.

– We plan to develop written guidelines for both information professionals and end-users who are interested in using knowledge classes. For information professionals, the emphasis will be on how to apply the principles and techniques of classification and information retrieval to the creation of knowledge classes and how to adapt different search strategies for different entries in knowledge classes. For end-users, the emphasis will be on how to modify an existing knowledge class to suit their personal purposes.

– We plan to further improve the software of knowledge class. Currently, the data must be edited in a text-editing programme, and

users cannot change the search strategies online. In the next version of Knowledge Class, the user will be provided with tools to add terms to the entries in the hierarchical structure, to add synonyms to the list of search terms, and to change search strategies, etc. An authoring tool will also be developed so that the complete Knowledge Class can be developed and tested in a graphical environment.

Conclusion

In summary, there has been an increasing need for effective mechanisms to organize Web resources for exploration, discovery, and retrieval. Multilingual and categorical or classificatory approaches to subject access, as demonstrated by major Web search engines and subject directories and in personalized devices, are evolving. These services manifest the traditional classification principles of hierarchical structure, domain partition, subordination of the specific to the general, and array of related subjects. They also have progressed beyond the conventions of traditional classification. With the advantage of storing a classification outside of the resources or their surrogates, these Web-based services are dynamic and can be very flexible in arranging and displaying categories and their relationships, as well as in reflecting special interests in localized directories. The principle of literary warrant is fully functional in the practices of Web subject directories. Nevertheless, there are still many limits in the use of subject classification structure and automatic clustering methodologies in the multilingual context. How best to ensure globalization and localization in a cross-language and cross-culture environment remains a challenge given the currently available technologies and theories.

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Describing the Elephant: What Is Continuing Professional Education?

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In the farthest reaches of the desert, there was a city in which all the people were blind. A king and his army were passing through

that region, and camped outside the city. The king had with him a great elephant, which he used for heavy work and to frighten his enemies in battle. The people of the city had heard of elephants, but never had the opportunity to know one. Out rushed six young men, determined to discover what the elephant was like.

The first young man, in his haste, ran straight into the side of the elephant. He spread out his arms and felt the animal's broad, smooth side. He sniffed the air, and thought, "This is an animal, my nose leaves no doubt of that, but this animal is like a wall." He rushed back to the city to tell of his discovery. The second young blind man, feeling through the air, grasped the elephant's trunk. The elephant was surprised by this, and snorted loudly. The young man, startled in turn, exclaimed, "This elephant is like a snake, but it is so huge that its hot breath makes a snorting sound." He turned to run back to the city and tell his tale.

The third young blind man walked into the elephant's tusk. He felt the hard, smooth ivory surface of the tusk, listened as it scraped through the sand, then as the elephant lifted the tusk out, he could feel its pointed tip. "How wonderful!" he thought. "The elephant is hard and sharp like a spear, and yet it makes noises and smells like an animal!" Off he ran.

The fourth young blind man reached low with his hands, and found one of the elephant's legs. He reached around and hugged it, feeling its rough skin. Just then, the elephant stomped that foot, and the man let go. "No wonder this elephant frightens the king's enemies," he thought. "It is like a tree trunk or a mighty column, yet it bends, is very strong, and strikes the ground with great force." Feeling a little frightened himself, he fled back to the city.

The fifth young blind man found the elephant's tail. "I don't see what all the excitement is about," he said. "The elephant is nothing but a frayed bit of rope." He dropped the tail and ran after the others.

The sixth young blind man was in a hurry, not wanting to be left behind. He heard and felt the air as it was pushed by the elephant's flapping ear, then grasped the ear itself and felt its thin roughness. He laughed with delight. "This wonderful elephant is like a living fan." And, like the others, he was satisfied with his quick first impression and headed back to the city.

But finally, an old blind man came. He had left the city, walking in his usual slow way, content to take his time and study the elephant thoroughly. He walked all around the elephant, touching every part of it, smelling it, listening to all of its sounds. He found the elephant's mouth and fed the animal a treat, then petted it on its great trunk. Finally he returned to the city, only to find it in an uproar. Each of the

six young men had acquired followers who eagerly heard his story. But then, as the people found that there were six different contradictory descriptions, they all began to argue. The old man quietly listened to the fighting. "It's like a wall!" "No, it's like a snake!" "No, it's like a spear!" "No, it's like a tree!" "No, it's like a rope!" "No, it's like a fan!"

The old man turned and went home, laughing as he remembered his own foolishness as a young man. Like these, he once hastily concluded that he understood the whole of something when he had experienced only a part. He laughed again as he remembered his greater foolishness of once being unwilling to discover truth for himself, depending wholly on others' teachings. But he laughed hardest of all as he realized that he had become the only one in the city who did not know what an elephant is like. [1]

Continuing professional education has been a topic of great interest within IFLA and throughout the profession for many years, yet confusion exists as to just what it means. The Continuing Professional Education Round Table (CPERT) has charged me to address this issue and this tale or fable presents a useful introduction. Just as the elephant was subject to several interpretations by the six young blind men, it took the wisdom of the sage to recognize that the whole of something tends to be complex, and that making assumptions from partial evidence can be very misleading.

In terms of continuing professional education, partial descriptions have ranged from courses in universities and colleges to workshops within the library setting. This article will attempt to place CPE within the whole of education for librarianship. The structure of the article will be linked to the components of the lead paragraph in a newspaper article: Who, what, when, where, how, and why. At the conclusion, I hope to have provided a useful map to the sometime confusing terrain and highlighted where CPE contributes to the whole.

Who: Every Information Worker

Continuing professional education is in the best interests of every person working in the information industry which, of course, includes libraries. Although the issue of competence will be discussed in more detail later in this article, it is important to also introduce it here since it is key to maintaining a successful professional career. Regardless of job title and responsibilities - professional, paraprofessional or clerical - every staff member has the responsibility to stay up-to-date as the profession, technology and society change. Such currency embraces knowledge, skills, and attitudes - in other words, the entire spectrum of educational achievement. This is an all-encompassing responsibility that extends throughout the length of the worklife.

What: Definitions

The phrase "continuing professional education" can be sub-divided into its components, in order to better understand its origins:

– *Continuing*...To go on with a particular action or in a particular condition; persist; to exist over a prolonged period; last.

– *Professional*...Of, relating to, engaged in, or suitable for a profession; engaged in a specific activity as a source of livelihood; performed by persons receiving pay; having great skill or experience in a particular field or activity.

– *Education*...the knowledge or skill obtained or developed by a learning process.

– *Continuing education*...An educational programme that brings participants up-to-date in a particular area of knowledge or skills.[2]

These definitions are quite straightforward and understandable, so it is unlikely that the existing confusion can be traced to this source. Continuing professional education is clearly the process of engaging in education pursuits with the goal of becoming up-to-date in the knowledge and skills of one's profession. In a paper delivered at the IFLA/CPERT Third International Conference on Continuing Professional Education for the Information Professions, the authors described CPE as "educational activities primarily designed to keep practicing librarians and information professionals abreast of their particular domain in the library or information centre, and to provide them with training in new fields." [3] This approach expands the definition and moves beyond maintaining current competence to the acquisition of new abilities as the profession changes. If the educational engagement is voluntary, then the individual's attitude toward work is proactive and forward-looking.

But perhaps the confusion is rooted in how education is perceived and where CPE is placed within the larger educational construct.

When: Dividing Education Into Its Phases

Education can be viewed as having several distinct, and overlapping segments.

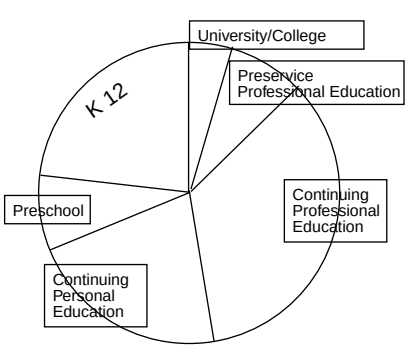

Fig. 1
A Lifelong Learning Model

The lines within the circle designate separation between segments, yet must be considered as flexible rather than arbitrary. Depending upon country and cultural norms plus personal interests, an individual will participate in various

aspects of the lifelong learning model. The segments can be identified as:

– *Pre-school*...any formal educational experiences occurring before the standard age of entering school.

– *K-12*...education occurring between Kindergarten and graduation from high school.

– *University/College*...post-secondary education that may, or may not, include professional pre-service education--depending upon the home country's professional requirements.

– *Pre-service*...education that may be a portion of baccalaureate study, post-diploma, or master's degree work.

– *Continuing professional education*... education that takes place once professional qualification is achieved, with the intent of maintaining competence and/or learning new skills.

– *Continuing personal education*...education engaged in related to personal interests outside the workplace.

This model is intended to cover the entire life span. Therefore, continuing education, whether professional or personal, occupies the largest portion of the model.

Where: The Venue

Now that we have a context for the way continuing professional education "fits" within the larger educational picture, it is time to move on to look at a range of possible venues. Continuing professional education can be offered in a variety of formats and locations, from formal face-to-face interactions to the use of electronic technologies. Some of these opportunities and venues include:

– *Formal Courses.* Seeking a degree may be viewed by some as continuing education and, in very general terms, this is true. However, a degree programme is more usefully defined as pre-service education. Even advanced degrees within library and information studies, while continuing a candidate's study in the field, should be regarded as different from continuing professional education. Formal courses may be offered by colleges and universities, technical schools, and private vendors/industries. They may extend across a semester or involve some combination of evenings and weekends. Some formal courses may be considered as CPE if the student's intent is the updating of professional abilities outside of enrolling in a degree programme.

– *Workshops and Seminars.* Educational events that are short-term in nature, from one to five days, fall into this category. A workshop typically involves some experiential learning, whether that be hands-on skills development, role playing or scenario-based discussion sessions. Seminars more commonly draw directly upon student involvement, with less instructor lecture time.

Both formal courses and workshops/seminars may be offered in two primary venues:

  – *Classroom*...when instructor and students gather together in a single physical location. In this venue, there may be a mix of degree-seeking and continuing education students. As stated above, it is the intent of the student that defines the educational context.

  – *Distance Education*...when instructor and students are separated by time and/or distance. Distance education is a broad term that covers a variety of possible venues, including correspondence, video or audio teleconferencing, Web-based instruction, and so forth. The list of options continually changes as technologies emerge and phase-out.

– *Conferences.* The gathering together of professionals in a conference venue such as IFLA provides many opportunities for continuing professional education. Participants can select from workshops, general sessions, paper sessions, and settings for social interaction and personal networking. Conferences offer a broad spectrum of formal and informal educational events and the social context is quite attractive to many professionals.

– *Tutorials.* For the purposes of this article, tutorials are defined as a one-to-one experience between instructor and student. Sometimes confused with "independent study," the tutorial includes both the face-to-face or electronic interaction, plus whatever research, reading and/or study is done by the student in preparation for that interaction.

– *Independent Study and Reading.* The "independent study" presented here involves work that is done entirely by the student, without any input from an instructor. Such study may be of short- or long-term duration and needs to be carefully documented if presented to an employing organization as evidence of continuing professional education.

– *Teaching, Presentations and Publishing.* Less often recognized as CPE, preparing for teaching, delivering a paper, or writing an article or book involves considerable research and study. While this type of CPE also requires documentation for employment purposes, it is certainly true that considerable learning and effort is involved with this effort.

Certainly, continuing professional education can occur in a variety of different contexts and venues. But how does it take place? Who has the responsibility for providing, authorizing or encouraging CPE? How can the quality be assured?

How: Issues of Responsibility and Quality

The responsibility issue is complex, involving participants, funders, and providers. This three-way involvement is a partnership, with all that such an arrangement implies: a

sense of equity and benefit resulting from the arrangement. Participants need to feel that learning has taken place; funding suppliers, whether personal or organizational, must recognize value for monies expended; and providers require that evaluations were positive and anticipated costs were met.

– *Participants.* Individuals are frequently represented as both participants and funders. Paying for one's own educational experience is a common by-product of a personal commitment to professional competence. Participants also expend time, and this time allocation becomes increasingly valuable as the years go by; time is often perceived as more valuable than money in the second half of life. Library workers may engage in educational opportunities at the workplace, which is termed in-service or staff development, or personally in any of the occasions or venues described earlier.

– *Funders.* While individuals may finance their own education, funding may also secured from various organizations. The library itself may support in-service training and/or offer stipends to employees who engage in education off-site. Library systems are another source of funding, as are governmental agencies and private endowments. In each country, the pattern of funding resources will vary and library workers need to become knowledgeable about where these monies might be located.

– *Providers.* Schools, organizations and vendors are representative of the many continuing professional education providers in the marketplace. For all of these agencies, recovering expended costs can be a critical concern. Beyond the financial considerations, however, lies the nebulous issue of quality. All of the partners in the CPE enterprise have an expectation that the educational event will be of high quality.

– *Quality.* How can quality be assured? In 1988, a unit of the American Library Association considered this question in detail and prepared a set of "Guidelines." [4] These "Guidelines" provided criteria for group programmes and activities, individualized programmes and activities, instructional materials and technologies continuing education providers, and learning consultants. While the question of quality could easily be a paper unto itself, there are certain approaches to CPE that should be highlighted:

  – *Needs Assessment* is the first step on the road to quality. Who is the audience for the programme? What are the needs of this audience? What are the most appropriate learning strategies to meet those needs?

  – *Planning/Developing Programme Objectives* is the stage where what is learned from the Needs Assessment is translated into programme design. Consideration of how adults learn is also factored into the decisions that are made.

  – *Evaluation* of the educational event is both the final piece of one event and the first piece of those to come, as data is fed into the next needs assessment exercise. There are six steps to evaluating a learning activity: know your purpose(s) in evaluation; delineate what you need to discover; identify who knows what you need to discover; communicate what you need to discover to those who are best able to inform you; gather the information; and relate the findings to your purpose(s). Evaluation is an essential ingredient in strengthening the quality of CPE. [5]

These issues of responsibility and quality are intrinsic to the "How" of making CPE happen.

Why: The Issue of Competence

Last, but certainly not the least of these components, is "Why": Why engage in continuing professional education? Why spend the money? Why put in the time and effort?

Central to the argument is competence: the competence of each individual library worker; the competence of the library/information agency so that it effectively serves its community; the competence that is both a right and an expectation by each customer. Competence rests on shifting sands these days, as the library strives to compete in a rapidly changing world. A century ago, libraries and publishers could have been regarded as the entire information industry; today, they are working to maintain market share in an industry that embraces more providers each day. Competition is very real, and libraries must provide service that is better, faster, and/or cheaper than other potential providers.

Consequently, the shelf life of a degree is approximately three years and declining. Maintaining competence and learning new skills must be at the top of every professional's "To Do" list. It is an ethical responsibility, to be sure, but also one that is pragmatic and critical for career success. Indeed, the "Why" of this article has been the easiest to compose. Continuing professional education is no longer an option; it is a requirement of professional practice.

Summary

And so, we have described the elephant. It is not simply a wall, a snake, a spear, a tree trunk or a frayed piece of rope. Rather, it is a very large animal, with many attributes and, increasingly, a life of its own within the profession. In fact, we need to learn to ride this elephant so that it can take us into a brighter professional future. It is too large and important to ignore, and we do so at our peril. Each person must discover this truth for him or herself. It is a discovery that is both a mandate and an adventure as we seek to become wise.

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Genealogical Geography: Place Identification in the Map Library

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Introduction

One major and very popular approach to enlightenment is family history research. Map libraries form essential gateways to

achieving such enlightenment. This article is based on years of experience as a map librarian answering enquiries from genealogical researchers. The wording of such enquiries would be very precise but, for a number of reasons, as I shall explain, ineffective in information retrieval from the normal descriptive sources of a library's collection. Enquiries were complicated by the fact that there appeared to be a multiplicity of vocabularies used - by geographers, cataloguers, other librarians and the readers themselves. Place name requests were generated from documents which may have corrupted the specific place name recorded and have not related the place to the jurisdiction involved and rarely linked other relevant jurisdictions. Hierarchies in geographical identification are difficult to establish both in "jurisdictional" and "status" orders. The terminology prescribed in LCSH (Library of Congress List of Subject Headings) is at odds with the international jargon of geographical terms and in many cases is imprecise. Precision is made more difficult by temporal changes in nomenclature and geographical location or extent. This article draws from a number of presentations made to family history groups and is part of a more intensive investigation into geographic classification and carto-bibliographical information retrieval.

In much of this article I am referring to traditional hard copy maps. As historical information is the objective of genealogical research, most of the maps required will be older and not likely to be available in digitized form. Modern technology allows the creation of maps in layers, and the user can choose the layers of information required. The number of layers available on one screen is, however, limited by readability. Hard copy maps and also those earlier maps which have been scanned and digitized do not at the moment allow separation of layers.

The Question of Place

One of the most frequently asked questions is phrased as "Where are you from?" or "Where do you live?" This is one of the most difficult questions to answer simply and in a meaningful way. This emphasizes the point that we are not place specific in our everyday living and that our reference terminology for places is never consistent, neither exclusive nor inclusive The range of overlapping areas in which we live comprise:

- State
- Metropolitan Area
- Local Government Area or Ward
- Suburb
- Locality
- Postal District
- School catchment district
- Electoral District or Division or Province
- Natural region
- Telephone exchange district

– Religious district - Parish, Deanery or Diocese
– Census District
– Etc.

Determinants of Location Description and Identification

There are a number of factors involved in identifying place. Location is governed by the activity or event considered in that location and the location also has a status. The location is circumscribed by a boundary and has a focal point and may also have temporal limitations. These factors are not spatially or temporarily exclusive and the specific locations will often overlap or coincide, as I demonstrate below. However, before studying the factors in detail it is necessary to consider three aspects used in the transfer of locational information.

Official usage may be prescribed - as is often the case currently due to the existence of official geographical nomenclature authorities, or may be accepted through patterns of long usage. On the other hand, names are often applied for commercial reasons without meeting the strictures of or acceptance by the authorities. There is also the weight of popular tradition, which has restricted accurate cartography down through the ages, but this is another study entirely. The matter is further complicated by the vagaries of mental maps and their inaccuracies, about which much has been written. These last two factors can be described as the common "Worldview" or "Weltbild". Government topographic maps usually only contain official names and these names are used in the compilation of national gazetteers. Other thematic maps, including government maps, are not so restrictive (e.g., geological maps) and tend to record the popular or vernacular place names with restriction. There is an atlas of Western Australia [1] that contains 34 maps of the State. Each map is a map of the administrative boundaries of divisions of the State adopted by different agencies, Commonwealth, State and Local. Names and boundaries sometimes vary, sometimes not. It seems unbelievable but it is quite logical - there is nothing to stop the absurd from being logical.

Activity, Event or Object in Space

References to location are also effectually references to a particular event or activity as much as an area or an object. I use the terms "activity" or "event" with broad meanings. What is shown on the map is either "cultural" or "natural". These are cartographic jargon terms and on the one hand, "artificial, built or human"; and on the other hand, "something occurring independently of human intervention". The activity is defined and limited by two things: it has a focal point and a boundary that localizes it and attracts a name. We are most concerned in using this aspect when we create or use geographical subdivisions for topical subject headings, but this approach is often misused. A specific geographical location should be described directly by its appropriate name, but allowance for linkage to other forms of the name is required in automated retrieval systems. In indirect subject access, one has to consider if this is for a comprehensive work on the locality (direct access required) or topic specific. If the latter, is it unique for the geopolity (indirect use of locality name) or topic specific for one of a type of localities in a wider geopolity? In the second instance, retrieval requirements indicate that the geographical subdivision should be for the wider geopolity. In a card catalogue it is reasonable to use:
– Stroud (England)–Maps.
– Streets–England–Stroud–Maps.
But in an automated catalogue, and these usually search indirect headings, the second heading should be:
– Streets–England–Gloucestershire–Maps.

The Status of Place

Status appears to have a cultural connotation only, but the choice of terms to describe geographical locations must also be applied to natural aspects, as they cannot be divorced from the cultural in any form of spatial data transfer. Terms for natural divisions are more subject to jargon and national language practices. We are all familiar with the concept of mountain ranges, but perhaps are less familiar with the broader term "cordillera or orogen". We can readily grasp the term "botanical province" and most know the word "tundra" if not "taiga" or other regional descriptors. It is when we consider the human aspect that the system becomes complicated, both hierarchically and jurisdictionally. Terms used are:
– Populated places
– Townlands
– Towns
– Cities
– Urban areas
– Villages
– Parishes
– Hamlets
– Etc.

The areas encompassed by these settlements have evolved in the case of "old world" countries and to a certain extent devolved before resuming evolution in the ex-colonial countries. Town plans were created on square mile blocks in North America and "county" or "shire" boundaries drawn by straight lines on a blank map before settlement. The matter of territoriality derived from aristocratic titles and the associated landholdings will be dealt with later. In retrieving information about a specific location it is important to recognize status because this can determine the wider geographical area to be used as an access term for searching.

Jurisdiction

For the genealogist a major purpose is to locate the jurisdictional repository for documentary records as well as locating events on the map. Subject classifiers and cataloguers blithely use the term "jurisdiction" to create and apply hierarchical subject headings and classification notation as if this is a unique and

exhaustive method of handling the problem. Reference practice requires the supplementation by gazetteers and historical topographic dictionaries and histories to determine bibliographical search terms. Jurisdictions are not a simple and single identification process. Constitutionally these are defined in acts which separate, allocate and delegate powers politically, administratively and ecclesiastically, creating "tiers" of government. Jurisdiction is a subdivision of activity and to meet the needs of the researcher both the location of an event and the appropriate jurisdictions in which it is sited are to be identified. When considering the ecclesiastical nature of jurisdiction, attention must be paid to the differing practices of the Roman Catholic and Anglican Churches. The former names dioceses by their extent while the latter by their cathedral city, although the territory administered may be the same, e.g., Sees of Iceland (Catholic) and Reykjavik (Anglican).

Boundaries and Focal Points

Every activity has a focal point and its area is circumscribed by boundaries. With the passage of time areas expand and the boundaries change. When I first moved to Perth, Western Australia in 1961 the Perth Metropolitan Area was considered to be that area within a 20-mile (32-km) radius of the Perth General Post Office. This latter is considered the geographical focus for the area, consisting of the City of Perth and a number of cities, towns and road districts (now called shires). Today the Metropolitan Area now extends 105 km from north to south and 60 km from West to East. By 2005 the north to south extent will be 175 km, several rural shires and even all or major portions of some previously non-metropolitan regions being absorbed by the growing conurbation. This is not an isolated example of global urbanization. Natural features generally have stable and recognized boundaries; human boundaries have either evolved or devolved to correspond to natural obstacles which form good defenses, although this stricture is not always so compelling at the present time.

Laws governing the distribution of electoral divisions are a rare but useful example of the definition of a community and its boundaries is to be found in the Commonwealth Electoral Act of Australia:

"(a) community of interests within the Division, including economic, social and regional interests;
(b) means of communication and travel within the Division;
(c) the trend of population changes within the State;
(d) the physical features of the Division; and
(e) existing boundaries of Divisions and Subdivisions."

Statutory terms of reference demonstrate the nature of specified place, but are complicated by the need to equalize as far as possible the population numbers within each division. This, of course, does cause some distortion in regard to meeting the other requirements.
The focal point of any area is dependent on the activity. Cathedrals, town halls, schools, and shopping centres, to give a few examples, can all be focal points for activities that have the name in common, a portion of the same territory but different boundaries. Shopping centres in particular may have quite a catchment area in relation to the community in which it is situated. The example of map sheet titles is interesting. The Landranger maps at a scale of 1:50,000 of the British Ordnance Survey each cover an area 40 x 40 km. and are centred on the major feature or group of features covered by the map and uses these for its title. The International Map of the World at a scale of 1:1,000,000 and the Australian topographic series at a scale of 1:100,000 are based on a grid formed by the use of geographical coordinates, 6 x 4 degrees for the IMW and 30 minutes for the Australian series. The Perth Metropolitan area appears in both series split into northern and southern parts, respectively in the bottom left and the top left hand corners of two sheets. The IMW sheets are titled Perth and Albany; the Australian maps are titled Perth and Fremantle. In neither case do the sheet titles demonstrate the area covered by the map sheets nor do they automatically present identification of the boundaries.

History of Human Settlement Development and Identification

As I have already mentioned, human habitations have either evolved or devolved. Nomad civilizations are not considered to have had fixed settlements, but they did have favored grazing and hunting areas, camping and wintering areas and there was competition for these. Not only would there have been some form of identification but also a necessity for defense. In identifying places we find the first emergence of place name elements, words which describe the nature or quality of the place. Current modern examples are -field, -up or -ville, but they are not just limited to suffixes. The change to agriculture saw the use of more long-lasting settlements, and these expanded with the growth of trade and industrialization. Thus places and their name evolved. Conquest in its turn brought enforced changes; there are plenty of examples in ancient and modern history. Throughout this process there was also the sense of a focal point for the "activity" with its boundaries.

The 16th century brought a change - colonization of new worlds. First the Americas, latterly Australasia, and to a certain extent Africa. Terra Nullius was a concept embraced in practice if not stated policy. The difference, of course, was in the state of geographical knowledge; maps showed wide-open spaces and there was little indigenous information available as there was in Eurasia. Surveyors drew potential settlements and administrative areas on blank sheets and sent pioneers out to settle and multiply. One only has

to look at the county boundary maps of the USA and Australia and the one square mile town block plans of US cities to see what I mean. These plans took no heed of natural boundaries and obstacles. The result - a redrawing of boundaries and unplanned population transit contrary to the plans of the colonial powers. It is interesting to see how few of the original counties of Western Australia retain their names, let alone their original boundaries. So we have two patterns of development in settlements - evolution and devolution with both processes reversible after a certain stage of development.

Status evolved as well. To look at English development from the Middle Ages on we must look at the administrative structure. Under the feudal system, land devolved from the crown through an infrastructure of counties, baronies and manors; each level responsible for providing just so much service through to the level above up to the crown. The territoriality of aristocratic titles which originally presupposed jurisdiction are now irrelevant. The Duchy of Cornwall with major landholdings in London is a separate entity from the County of Cornwall (political entity); the Duchies of Devon, Norfolk, Northumberland and Westminster are grounded in Derbyshire, Sussex, London and Cumbria respectively. With the reformation we find a partial democratization of the upper levels (due to the growth of the merchant class) and the transformation of the manor to the parish - the ecclesiastical parish. It was not until 1824 as part of wholesale legislative measures to cope with the industrial revolution that the civil parish separate from the church parish was created. The two types of parish then developed in their own ways, one depending on population changes, the other on changes to church membership. Names may have been retained or new ones coined - here one is very interested in the status applicable to each place and its name. The exercise in 1972, which caused the County boundary revision in the UK in 1974, has been repeated and boundaries are being changed again. For instance, the former County of Rutland has been restored!

Toponyms and Exonyms

A toponym is a place name. More specifically it is the officially recognized name of a place within its own jurisdiction. Most countries and states have geographical names authorities who approve the nomenclature for that jurisdiction. They have generally only existed since World War II and have only received formal international recognition since the 1970s. This has not stopped the adoption and usage of unofficial names and there has also been a proliferation of place name changes for various reasons. The existence of differing official and unofficial names has already been mentioned. This, however, only referred to names within one language community. Considerable international effort through United Nations conferences, global and regional, has been made to provide an agreed geographical nomenclature throughout the world. As the toponym is the recognized form of a place name within a polity, so an exonym is the officially recognized usage for place names in another country - London, Londres; Bruxelles, Brussels; and Praha, Prague. The OPALINE database of the Bibliotheque nationale de France does provide a solution to this problem in accessing the map collections from a subject approach.

Most official records created more than 100 years ago were copied from oral reports and this caused errors due to phonetic rendering and speech corruption. "The back of Hill End farm" was corrupted by elision and dialect and ended up on a document as Backhill End in one example I have dealt with. Variant spellings abound for the same pronunciation - Street and Strete. Bristol was originally called Bricg Stowe (place of the bridge), became Bristowe and then, because of the local dialect with its terminal L, became Bristol. The same happens on the continent, the island of Funnen in Denmark is shown on Danish maps as Fyn.

Toponymy and the History of Place Names

The history of particular place names is sometimes obvious, sometimes not. There are at least two Colognes. This name developed from the Roman habit of naming settlements (founded in the provinces to settle retired soldiers) Colonia Aggripina or Augustalis, etc., (depending on the then emperor, his heir or favorite). The first became known to the English and French as Cologne, to the Germans as Koln. Political correctness abounds in toponymy. Not only conquest but international rivalry and sensitivity as well as ideology, religions and politics also make their mark. There is a plethora of competing French and German names on the French, German and Swiss border areas e.g., Lorraine or Lotharingia. The Baltic States provide a variety of names in Polish, German, Russian and Slavic. I particularly enjoyed Michener's Poland, which gave an enthralling and readily understandable account of boundary and name changes in Eastern Europe. We must also remember such name changes as St. Petersburg, or Petrograd or Leningrad and pay attention to name changes in places like Vietnam.

I have mentioned the move towards authorizing names. People have always been contrary and done their own thing. This is very noticeable in the mining areas. Prospectors have consistently named their diggings independently. Some of the names have survived to be recognized and shown on topographic maps. As I have stated above, place name indexes are not comprehensive gazetteers and only list officially recognized names. However, they are also subject to human and typographical error. Thomsons Brook in W.A. (the official name) appears in the Australian Master place name index as both Thompson Brook and Thomson Brook. However, the geological maps are less severe and

record most of the unofficial names. Developers are also name providers. At present they are generally well controlled and work within limits set by the Geographic Name Authorities. This was not so in the past. Names for new land releases would be selected for their selling power and gradually be lost, other than on personal records created during their brief life - names almost guaranteed to appear on some of the documentary records cited by family historians and thus used as their search terms. One last difficulty is a process I call "creep". A place name moves. When I was in the Air Force in the 1950s I used to go home via Bath (Aqua Sulis = Hot Springs to the Romans) and passed successively through Bath-easton, Bathhampton and Bathwick - each with their own railway stations (closed in 1956). In the 1970s I was asked to find Bathwick on a map and horrors - a Bathwick House and a Bathwick Road but no Bathwick. Then in the 1980s a new map of Bath shows the locality of Bathwick. Localities may decline, cease to be fashionable and a new area spring up alongside. This goes through the same process and the next new development is named "historically", so a lost name re-emerges but not necessarily in the same spot. I have found aspects of this phenomenon in many areas while researching geographical locations for clients.

The Objectives of the Genealogical Researcher

Some genealogical researchers are aware of all the objectives in using maps in their research. Having made several presentations to family historians of varying expertise and experience, I have consistently amended or refined my coverage of the subject. Beginners and the less cartographically sophisticated tend only to request a map to show the location of a place mainly as a simple illustration without realizing the benefits. However, the main function of map use in genealogical research is its use as a tool in effective pursuit of family history; the production of effective maps to illustrate the compiled family history is often a separate exercise.

The researcher depends upon documentary evidence to support his genealogy. The prime purpose of his map use is to locate activities and events, which led to the creation of records, and to identify the repositories where those records may be found. The repositories will be determined by the activity or event and will not necessarily share the same name. The example of a street address in Walton-on-the-Hill in 1830 shows how many jurisdictional locations it has had over the next 150 years. A database is being created in Western Australia linking place names and jurisdictions for all communities of 200 or more population; it will also need to incorporate isolated place names.

The enquirer in framing a request usually does not distinguish between the different sets of information required and the limits inherent in maps due to scale and size. Essentially three maps are required:

- *Small scale* showing the major area in which the enquirer's family lived and its geographical relationships to major known locations;
- *Medium scale* (1:50,000 to 1:250,000) showing the environment in which the family lived – physiography and topography, lines of communication and commercial centres;
- *Large scale* (1:10,000 or larger) showing building details or on which such details can be plotted.

Also required will be boundary, cadastral and other thematic information. Given the temporal changes that have occurred, the need for a wider range of maps is implicit. It is also not always feasible to provide the maps for the reader to do the rest. Some personal readers need map reading and drafting assistance. When providing a remote service, as happens in the Western Australian library service, it is often necessary to provide annotated copies from maps to meet the needs shown above. It is a problem facing all reference librarians as to how far they should go in providing service.

Tools and Strategies for Genealogical Map Reference Work

Maps are the obvious tools to be found in map libraries. They are often more than they claim to be. Cartographers produce a map for a particular purpose with prime thematic information. This is reflected in the title and the catalogue record. The main information is usually supported by other information to provide a base and context. It is often this secondary information which is the specific detail needed by the map user. The terminology used by the researcher does not correspond to that prescribed by the arbiters of cataloguing practice for place names. The authoritative sources cited in cataloguing manuals are fixed in time and limited to officially approved names. Names given may be corrupted – "Backhill End" turned out to be "at the back of Hillend Farm" and "Churchaas-martin" as "Church House, Marton (Middlesbrough)". Eastern Europe in particular was subject to major boundary and imposed language shifts as Empires flowed and ebbed. Documents I have handled from one region in southeast Poland and the Ukraine have been multilingual.

To cope with these, the map library should hold or have access to, as well as current and historical gazetteers and map indexes, topographical dictionaries and histories, travel guides (the 19th century *Baedekars* I have found extremely useful). There should also be access to a wide range of directories (local and professional) and official and university lists and registers. The British War Office issued some useful multilingual gazetteers of Eastern European countries after the Second World War. Toponymical works such as those of the English Place Name Society are also desirable. As more countries are making their official gazetteers and place name indexes available online, it is

becoming easier, but "How can you look up a word in the dictionary if you don't know how to spell it?" The map librarian must gain some knowledge of the principles of toponymy – especially of place name elements and be able to think laterally to decipher handwritten phonetically spelt names and locate or plot them on maps.

Conclusion – Skills and Outcomes

Nearly 20 years ago I participated in a workshop on the qualifications required for a map curator. Both library and cartographic/geographic skills were considered essential components, together with physical bibliographic knowledge. To these I now add some specialization in toponymy. Maps are an information media and may require interpretation to make their contents available to the user – the map librarian must be able to do this. As mentioned, such is the physical make-up of maps that most provide other information in support of their primary theme. It is often this supporting information and interpretation that is required by the researcher. If we are to succeed as gatekeepers on the path to enlightenment, we need to empower ourselves to release the wealth of information for which we care.

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IFLA's Programme of Universal Bibliographic Control: Origins and Early Years

Dorothy Anderson

Dorothy Anderson became involved with IFLA when she was organizing secretary for the international cataloguing meeting in 1959, which planned the International Conference on Cataloguing Principles, Paris, 1961. Over the next 10 years she worked with A. H. Chaplin on various cataloguing projects arising from that important conference, editing the *ICCP Report* in 1963, *Names of Persons* in 1967, and the preliminary edition of the *Annotated Statement of Principles*. At the same time she was part-time research assistant to David Mitrany, the international political theorist, the originator of functionalism, and was engaged in her own historical research and writing, with the publication of two books. She was Organizing Secretary for the IMCE in 1969, and thereafter continued her work with IFLA, as Director of the IFLA International Office for UBC from 1974 until 1983. In retirement she undertook bibliographic consultancies, but then returned to history and writing. She has contributed several articles to the *New Dictionary of National Bibliography*, and her biography of the disgraced Victorian soldier, Valentine Baker, was published in 1999, entitled *Baker Pasha: Misconduct and Mischance*. Her career and work are featured in *Portraits in Cataloging and Classification,* Haworth Press, 1998. She can be contacted at Flat 1, 18 Park Lane, Bath BA1 2XH, UK.

Origins

A note in *International Cataloguing* 3 (2) (1974), announced a new development within IFLA, the setting up of its International Office

for UBC. It would be convenient, therefore, to presume that date, 1 July 1974, as the beginning of IFLA's UBC programme. But it is not exact - or only from an organizational point of view. By 1974 the IFLA programme was already operational: it would be more appropriate to accept as its origins the International Meeting of Cataloguing Experts (IMCE), Copenhagen, 1969.

The objectives of the IMCE were to examine developments since the International Conference on Cataloguing Principles (ICCP), Paris,1961, and to consider new projects related not to catalogue headings (as at ICCP), but to the standardization of the descriptive part of the catalogue entry.

It was a fruitful and decisive meeting: its resolution, taken from the paper prepared by Suzanne Honore of the Bibliotheque nationale, Paris, set out the basis for: "... a system for the international exchange of information by which the standard bibliographical description ... would be established and distributed by a national agency... The effectiveness of the system will be dependent upon the maximum standardization of the form and content of the bibliographical description."[1]

Two decisions of the IMCE were equally important: first, that it would be possible to agree upon the required standardized bibliographic description, and for this purpose an international working group was set up to examine the draft available (prepared at the British National Bibliography); secondly, there was the need for a permanent secretariat which would ensure continuity of work, with results appearing in published form: funds should be sought to establish such an office. The IMCE resolution and decisions established three of the necessary elements for an international programme: a basis and philosophy, a fundamental major tool, and a means of implementation. Missing was the fourth element: a name.

Results followed quickly: in July 1971 the IFLA Cataloguing Secretariat was established, with a three year grant from the Council on Library Resources (CLR), Washington DC [2], and with A.H.(Hugh) Chaplin as its Chairman, myself as Executive Secretary, and a Steering Committee. The stipulations which CLR made with regard to the grant were direct: the Secretariat would publish a journal, would seek other sources of income, and would provide quarterly reports and accounts. *International Cataloguing* 1 (1) (January-March 1972) set out the requirements, noted the members of the Steering Committee, and reported on projects under way and activities to be undertaken.

The fourth element, a name and initials for the programme, appeared in 1971, and the responsibility for creating both the name and its image rests with Herman Liebaers, IFLA President. He wrote of the

total UBC programme: "...as an intellectual construction, yet practical aimed at realities, directed at known problems; and at the same time imaginative seeking out future areas of need ..."

UBC's first appearance in an article was written, with the encouragement of Dr Liebaers, by F.G. Kaltwasser, of the Bayerische Staatsbibliothek, in the *Unesco Bulletin for Libraries* 25 (5) (1971). UBC was chosen as the theme for the IFLA Conference, Grenoble, 1973, and as the subject of IFLA's contributory paper for the UNESCO Intergovernmental Conference on Planning National Overall Documentation Library and Archives Infrastructures, September 1974. This was prepared by the Cataloguing Secretariat, with the title *Universal Bibliographic Control: A Long Term Policy, A Plan for Action*. [3] At the Congress the objectives and plans for the UBC programme received positive support and UNESCO endorsement. This was to prove invaluable in practical terms (contract funding) and in publicity.

The timing was right: what was offered was a practical programme directed at national library and bibliographic organizations with suggestions for actions, some long term and demanding, others smaller, more easy to achieve. By cooperation at the international level, by building up a network of operations in which there was a basis of agreement, the UBC network would come into existence. The IFLA document was emphatic that the programme was directed at all countries, that it was based on the quality of the bibliographic records, not quantity: that is: "IFLA ask that each country accept the responsibility for making the bibliographic record of its own publications in accordance with agreed international standards. The acceptance of that record as the definitive bibliographic description... is the acknowledgement of equality by the rest of the world... All countries can participate as component parts of a worldwide UBC system if their contribution follows patterns and standards that are universal: and equally can receive".[4]

It was a programme with an appeal both for larger book producing countries looking at the possibilities of computer produced records, and for developing countries with newly established national organizations and limited book production, where the programme offered the recognition of international professional standards in the making of their own national records.

Establishing the IFLA Programme

There was really no difference between the two, the Cataloguing Secretariat and the UBC Office, in terms of resources (a small office with limited staff), and the stipulations of the CLR grant were the same: to publish a quarterly journal, to look for income, and to forward quarterly reports and accounts. The last was a chore and a discipline: to halt the work of the moment in order to set out the activities of three months was an exercise in summarizing, and also a useful way of assessing progress and costs, and of identifying possible sources of new income. There were unexpected benefits: there could never be any queries as to what we were doing and what costs we had incurred. The history of the IFLA Secretariat and the IFLA UBC Office is set out in those quarterly reports. [5]

The difference in programmes between the Cataloguing Secretariat and the UBC Office was far reaching: whereas the first had served one IFLA Committee, the second had responsibility for a programme that ranged over the interests of several Committees. The formation of the new office also required a new Steering Committee: Hugh Chaplin resigned,[6] and Rutherford Rogers of Yale University Library became Chairman; the interests of the various related Committees were represented on an Advisory Committee.

The establishment of a permanent professionally staffed unit was new for IFLA, and not envisaged in its Statutes, and there were some elements in its working that were not easily accepted by the Executive Board. The CLR requirement that the office should look to find income through its own activities was not altogether appreciated, and was certainly not understood by IFLA members: as the publishing programme (the obvious and major source of income) developed, there were murmurs of "entrepreneurship", which, in the 1970s, was not a term of approbation.

When the Cataloguing Secretariat became a functioning office, its accommodation consisted of two rooms made available by the British Library, and its staff was made up of a part-time secretary, research assistant, Executive Secretary, with the Chairman available for consultation. We undertook all office routines, and quarterly sent out *International Cataloguing*, putting the copies in envelopes and sticking on the stamps. Once a month I made out salary cheques and checked the tax tables for deductions, and each week paid into the bank income received from publications. At a time of spiralling inflation, visits to the bank became painful, as our income was whittled away by conversion from overseas currencies.

Gradually matters improved: an outside organization took over subscriptions and distribution of *International Cataloguing*, another the responsibility for the administrative routines of salaries, taxes, and insurance. With the change to the UBC Office came further improvements: the British Library extended its overall hospitality with better accommodation and the provision of common services. The staff for the first three years remained small: part-time secretary, full-time research assistant, one day a week bibliographic assistant, and myself full-time. This was a period of consolidation in operating an international professional programme, engaged in:

– bibliographic research, lecturing, writing;
– acting as a "clearinghouse" on matters relating to bibliographic standardization;
– servicing working groups;
– editing and producing publications; and
– liaising with national and international organizations.

Identifying Priorities in the IFLA UBC Programme

At a meeting of the UBC Advisory Committee held prior to the UNESCO Intergovernmental Conference, the priorities of the UBC programme were agreed: present as well as the officers of the various IFLA Committees (which became Sections in 1976) were representatives of ISO TC/46 and the UNESCO programmes, NATIS and UNISIST. The Committee identified as first priority the establishment and improvement of national bibliographies, and UNESCO accepted the responsibility for hosting and organizing a major conference for that purpose, with a date set for 1977. The UBC Office's role would be as the key body in providing the substance for the conference, in particular the development and publication of more cataloguing "standards".

What is surprising was that so much was achieved in the next three years, which would never have been possible had it not been for the interest and dedication of cataloguers in so many countries. The UBC Office gave a focus for work. There was a time-scale for projects and their completion, the possibilities of publication, and there was the continuing presence of a professional unit for referral, support, and recognition. It was a period of technological experiments, with existing practices under scrutiny in the interest of improvements and international agreement. The issues of *International Cataloguing* reflect the momentum that existed nationally and internationally, with reports on new cataloguing codes, on development of national automation projects, with suggestions and proposals for international bibliographic projects which could be undertaken under the aegis of IFLA.

There was also the requirement to complete projects outstanding from the ICCP. Three were considered particularly important. The acceptance of the principle of corporate entry at the ICCP had highlighted the need for further examination of the definition and use of corporate body headings. It was a project for a scholar, a linguist, a dedicated cataloguer, and Eva Verona, from the National University Library, Zagreb, undertook the task.[7] Her manuscript, written in English, was edited in the UBC Office and published in 1975, as *Corporate Headings ... A Comparative and Critical Study*. It was probably the last major study ever to be undertaken, or required, on the subject.

One ICCP recommendation, *List of Uniform Headings for Higher Legislative Bodies of European Countries*, had been a project accepted by the USSR Cataloguing Committee in 1966; there had been drafts, reports and delays. With support from the UBC Office and the prospect of publication, the USSR Committee completed its work, and the lists, circulated for approval, checked through the UBC Office (editorial work was undertaken by a British librarian) was published in 1975.[8]

A request came from the Anglo-American Cataloguing Rules (AACR) Revision Committee for a new edition of *Names of Persons* (the last edition had appeared in 1967), which would be noted in AACR as an authority for name usage. In response a revised text was prepared, following the same approach as for other projects: each entry was checked by a national expert whose approval was acknowledged in the entry. The 1977 manual, *Names of Persons: National Usages for Entry in Catalogues*, highlights the problems encountered in the editing, printing and proof-reading of all our publications, the number of languages and variety of scripts. We were fortunate to have available printers who were resourceful and imaginative.[9]

The Development of the ISBDs

The first task of the Cataloguing Secretariat had been the servicing of the IMCE working group preparing a standard bibliographic description. Its members, made up from the IMCE delegates, were high powered and energetic, and they worked fast and effectively. By December 1971 the first edition of the ISBD, published under the imprint of the IFLA Committee on Cataloguing, had been distributed worldwide for comments, with a recommendation and request for its implementation.

At the beginning of 1972 the British and German national bibliographies reported implementation, and further acceptances followed swiftly (all the group members were in influential positions within their national library organizations). This immediate introduction, particularly in the British National Bibliography with its worldwide circulation, gave the ISBD programme an impetus that it never lost. Three pages of ISBD checklists in *International Cataloguing* 2 (3) (1973) noted countries where it was in use and others where it was under examination for the introduction into national cataloguing rules.

Acceptance of the ISBD so readily came about not only because of this immediate implementation, but because of its appeal: it was what the international cataloguing community was looking for, and it was liked. In a very short time there were drafts, official and private, for a standard bibliographic description of different forms of library materials. IFLA Committees set up working groups to consider the requirements for serials, maps, music, rare books, non-book materials. Other organizations became interested, and an ISBD draft circulated through the ISO/TC46 com-

mittees. *International Cataloguing* provided continuing reports on the original and on new ISBDs, with request for comments on the drafts. It became necessary to distinguish texts and materials: *International Cataloguing* 2 (2) (1973) announced that henceforth ISBDs would be distinguished by initials: hence ISBD(M) (the original), and the others, ISBD(S), ISBD(NBM),etc. There was also the necessity to note ISBD translations and to stress that these must be reported to and authorized by IFLA.

It was not all straightforward. The original text, in use, revealed flaws in the wording, which were resulting in variations in interpretation. A revision meeting was held in 1973, an improved text was agreed, and the "first standard edition" of ISBD(M), with its distinctive orange cover, was published in 1974. At the same time, a first edition, in blue, of ISBD(S) appeared.

The development of the ISBDs in these three years was a learning experience: for working group members, in the concentrated study of drafts, in participating actively in meetings where discussion could be in a variety of languages (but mostly English and French, with members at hand to help); for the library community, watching the processes by which traditional cataloguing was changing, waiting their opportunities for comment and criticism; and for the UBC Office in developing the framework within which working groups were assisted (each ISBD had a UBC staff member as liaison) and persuaded into keeping to timetables, in arranging distribution of drafts, and finally in providing editorial assistance in the preparation of texts, the introduction of examples, printing and publication. Each text as it appeared was improved, in its contents, logical presentation, and appearance.

There were also problems of a diplomatic kind. At first, when there had been no particular interest in the IFLA working groups, the choice of members had been straightforward, using established IFLA contacts. Once there was publicity about their work and its value was recognized, difficulties could arise. It was not always possible for the UBC Office to know of national rivalries or the importance of individuals in national situations. But there were also successes in persuading East European countries to agree to our choice of group member (the right person from the cataloguing point of view). UBC Office funds were available for members' expenses, but were often not requested. Progress could not have taken place had it not been for the generosity of national library organizations in allowing their staff, as working group members, time and resources including travel expenses. (The difficulties of choice of members and the generosity of library organizations related to all UBC working groups not just the ISBDs, but because they were the most publicized, so the problems were most apparent.)

It was not easy adapting the ISBD(M) to other kinds of library materials, and working groups began to introduce differing approaches in describing particular elements of their library material. A solution, put forward by the AACR Revision Committee in 1975, was for the establishment of a basic framework, a general standard description, which would be followed by each specialist ISBD. It was a practical solution, the final creative step in developing the range of standard bibliographic descriptions. A draft ISBD(G) was circulated and presented for discussion and evaluation at a meeting in Paris of the ISBD group officers and representatives of AACR. There was consensus that each ISBD would follow the ISBD(G) outline: it was a discipline that made sense. But acceptance was not without difficulties.

The ISBD(S) presented special problems, firstly, because of the elusiveness of the material, and secondly, because of the conflicting approach to serial description in the records of the International Serials Data System. Its solution to the problems of serial titles had been the creation of "key title", which could be a title manufactured according to ISDS rules. When many national ISDS centres were established within national library organizations, a dichotomy emerged with the need to make two differing bibliographic records, one using "key title" for ISDS, the other based on cataloguing rules as the national record.

The ISBD(S) working group had agreed on a conclusion directed at harmonizing ISBD(S) with the ISDS record and using "key title". At the ISBD(G) meeting, it was emphasized that within the ISBD family the title as it appeared on the titlepage ("title proper") would be followed. It was a difficult painful discussion, followed by a vote. The (G) framework prevailed, but as the pages of *International Cataloguing* show, the conflict between differing serial records lingered on into the 1980s.

The acceptance of ISBD(G) was the last major change, and it was agreed that there should be a period of consolidation as national library organizations completed their studies and prepared to introduce the new descriptive standards into cataloguing rules and national bibliographies. ISBD(M), revised to follow (G), was published in 1977. There would be no further changes to the texts, it was agreed, for five years; the UBC Office would act as maintenance agency in respect of comments and translations. The UBC Office also took on the task of responding to the criticisms appearing in library journals of IFLA's supposed role in becoming a "standards" producing organization; much time was spent in explaining that the IFLA documents were recommendations for "standard practices".

Other IFLA UBC Office Activities: Projects, Publicity, Contracts, Support

The development of the ISBDs dominated the early years, but there were many other projects sug-

gested through IFLA, by national bodies, and by UNESCO. The UBC Office maintained a steady pattern of promoting and helping such projects, leading on to editorial work followed by publication. The results were not necessarily bestsellers and many had an appeal only to specialist libraries and cataloguers. In some cases, completed projects slipped away, with recommendations made but ignored, sometimes because easier solutions had been found through computerization. One project, proposed by the IFLA Committee on Mechanization in 1972, the standardization of content designators, expanded to become *UNIMARC* (first published in 1977). The International MARC Steering Committee began a series of research projects in 1975, and the UBC Office acted for the Committee and as its treasurer, and published its results.

There was also the requirement to make the UBC programme better known and understood. There were always possibilities of lecturing (but few, except in the USA and Canada, produced income), and there were conferences, meetings and seminars. Many were rewarding and memorable: for example, regional meetings in the Caribbean, 1974, and in Singapore, 1975; the IFLA Worldwide Seminar in Korea, 1976 (the first IFLA meeting to be held outside of Europe); the grand library congress in Brasilia, 1975; an intimate discussion group in Budapest, 1976. Participation in such meetings, as consultant or keynote speaker, resulted sometimes in consultancy fees; more usually there was payment of travel and expenses, with hospitality from colleagues that was warming and generous.

There was the continuing problem for the UBC Office of funding and of looking for sources of income. There was the publications programme, but from the nature of the material, printing costs were heavy, and apart from the ISBDs, the texts were not multiple sellers. The preparation of more cheaply produced booklets in the series of *Occasional Papers* added some further income. There were UNESCO contracts for particular projects: for example, the International Target Audience Code, published as Occasional Paper, No.1; and there was an annual contribution from UNESCO for the UBC Office's role as a "clearinghouse" on bibliographic information.

More significantly was the increasing financial support that IFLA received for its UBC Office from 1975 onwards from a growing number of national library organizations; and there were further grants from CLR. National libraries were generous in supporting the UBC Office in other ways: through staff membership of working groups; by allowing staff members to help the UBC Office at meetings, as interpreters and conference assistants; on secondment as UBC staff members for limited and longer periods. There was the continuing contribution of the British Library in accommodation, common services, and staff support. As the situation of the UBC Office consolidated, so did the conditions for its staff improve. Staff conditions, grades and salaries, were aligned with those within the British Library. Staff numbers increased: two full-time research assistants; part-time bibliographic assistant, secretary, clerical assistant; and myself full-time.

The new IFLA Statutes in 1976 presented new problems (but one positive result was updating the publishing imprint of the UBC Office). Assessing the UBC Office's position and its relationships with other sectors of the complex structure was difficult as new officers grappled with the administrative burdens of communications and hierarchical functions. The solution was layers of reporting, with documents distributed to Sections, Divisions, Professional Board, Executive Board, and funding bodies. The two-page document, setting out Statutes for the UBC Steering Committee, December 1977, was intended to be comprehensive in defining responsibilities for the UBC work plan, but could not be effective. However much effort was put into communications, the dilemma remained: it was not possible for a committee made up of volunteers, working at a distance and in their spare time, meeting only occasionally, to manage the organization and day-to-day running of a full-time professional unit. Much depended on personalities and good will.

UNESCO/IFLA International Conference on National Bibliographies, 1977

For three years the UBC Office organized its work around the preparations for the UNESCO Conference, with planning meetings held regularly. The particular contributions of the UBC Office were: the preparation of the Conference working document, in which a set of recommendations for the standardization of national bibliographies would be presented; the preparation of one of the background documents, *Standardizing Activities of Concern to Libraries and National Bibliographies* (published July 1976, revised July 1977); and the publication of five ISBDs in time for the Conference (UNESCO purchased 150 copies of each for distribution to delegates).

Restructuring within UNESCO, with the establishment of the General Information Programme, simplified and improved planning procedures. UNESCO funding provided expenses for a number of delegates from developing countries, and a Canadian agency funded others; the remainder were present in the interests and expense of their own national bibliographic agency. The Conference itself was successful, an occasion for the acceptance of practical steps towards ensuring that national bibliographies looked more alike in the way they presented their basic information, and in the style and substance of bibliographic entries. Equally important it set in motion a series of projects and recommendations which influenced developments on into the 1980s - and another chapter in the history of IFLA's UBC programme.

Immediately following the Conference, the UBC Office prepared the final report, and then *Guidelines for the National Bibliographic Agency and the National Bibliography*, published by UNESCO in December 1979. A further UNESCO initiative was a series of regional seminars in Africa, starting with Nigeria, 1978, Senegal, 1979, and the establishment of the African Standing Conference on Bibliographic Control (ASCOBIC). It was the members of this group which contributed the entries to *African Legislative and Executive Bodies*, published by the UBC Office, 1980.

Today's Perspective

There was another International Conference on National Bibliographic Services, Copenhagen, November 1998. In the 21 years since the earlier Conference, the technology has changed dramatically, the range of information materials is wider, different, pervasive, but the concept of UBC remains the same: "... a long-term programme for the development of a worldwide system for the control and exchange of bibliographic information...". Those of us present at UNESCO in 1977 would not have felt out of place.

On the other hand, cataloguing of today differs greatly from 30 years ago. The computerization that we looked forward to so eagerly has changed practices in ways that we could not even envisage. There are now library systems where nationally accepted bibliographic records are purchased from a centralized data supply agency and distributed through the book supplier. From that point of view it must be considered that for some countries the major objective of UBC has been achieved.

Today the cataloguer within a library system knows little of the anguish of the discussions that went on 25 years ago, barely recognizes the initials "ISBD", and may not have heard of UBC - which is a pity. Herman Liebaers in creating the name and initials had an image and a practical dream: he has every right to be proud of his inspiration.[10]

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1 Report of the IMCE, Copenhagen, 1969, *Libri* 20 (1): 115-116 (1970).

2 The CLR had also funded the ICCP and the IMCE.

3 The full text was published by Verlag Dokumentation in 1974. Mr Liebaers' comments appear in the foreword on page 6.

4 Ibid., p. 18-19.

5 A set of the CLR quarterly reports is deposited with the School of Library, Archive, and Information Studies, University College, London as is *International Cataloguing* from Vol. 1, No. 1 in 1972.

6 For an assessment of his international contribution see Anderson, D. "A. H. Chaplin: An Appreciation". *International Cataloguing and Bibliographic Control* 26 (1): 3-4 (1999).

7 For an assessment of her international contribution, see Anderson, D. "Eva Verona: An Appreciation". *International Cataloguing and Bibliographic Control* 25 (3): 47-48 (1996).

8 The Chairman of the USSR Cataloguing Committee wrote appreciatively, praising the appearance of the book: "... we are indeed indebted to you".

9 Other publications originating from ICCP recommendations were *Anonymous Classics*, *Names of States*, *Headings for Voluminous Authors*, *Liturgical Works*.

10 As a matter of policy very few names are given in this article. As noted throughout, there were so many who contributed to the UBC programme that to give names and organizations would double the text. All names, with accounts of related projects, are provided in the issues of *International Cataloguing*; the contributions, financial and otherwise, of national library organizations are specified in the CLR quarterly reports.