

## A Content Analysis of Library & Information Science Serial Literature Published in Denmark, 1957–1986

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A content analysis of Danish library and information science (LIS) serial literature was conducted to determine the subject focus of the literature from 1957 to 1986. Two nonresearch journals, the union-owned periodical *Bibliotek 70*, and *Bogens Verden* published by the Danish Library Association, produced both the greatest number of articles and the largest number of pages. Throughout the 30 years of data analyzed, one subject area was more popular within the profession than any other, Individual Libraries/National Library Systems, or the geographical viewpoint on libraries and library systems. Management of People, Resources, and Systems was a major concern as was Cooperation, Networks, and Resource Sharing. Overall, the results of the analysis reveal strong concerns with practical librarianship and action and current events oriented topics whereas the theoretical aspects of librarianship and the areas of information science have received scant attention. The marked public library orientation is undoubtedly a reflection of the unique position of public libraries in Denmark and the existence of powerful funding schemes supporting public library development.

The purpose of this study is to identify and discuss the major issues, trends, developments, and influences in the library profession and the discipline of library and information science (LIS) in Denmark during the period 1957–1986. The year 1957 was chosen as the starting year for the analysis as it marks the implementation of new library education programs at the Royal School of Librarianship in Copenhagen established as an independent state college in the field of library studies the previous year. It could reasonably be expected that the setting up of a recognized national center for professional education and training in librarianship—itsself a milestone in the history of the Danish library profession—would stimulate professional communication, scholarship, research, and writing for publication in LIS in subsequent decades. Also to be expected from the consolidation of library studies following the creation of a formal, legislative framework of library education in Denmark would be an impact on the process of professionalization.

Determining the topics of concern to members of the Danish LIS profession by examining the professional literature during a 30-year-period is the major focus of this study. The present study is not just concerned with LIS research—in fact, general pro-

fessional articles including descriptive items and opinion papers are considered as well. An investigation of subject trends as reflected in the professional literature taking place in the Danish LIS world from 1957 to 1986 should: (1) reveal subject dispersion patterns and contribute details on high- and low-ranking topics in terms of "popularity," topics declining and gaining ground, and changing emphases and shifts in the subject coverage over those years; (2) offer possible explanations, if any, of the considerable attention devoted to some subjects; (3) identify gaps and lacunae in the "universe" and range of areas spanned by the Danish library-information profession; (4) add to our knowledge of the profile, *self-awareness*, and professionalization process of Danish librarianship as it has developed during this period; and (5) contribute to mapping out the Danish LIS universe over a specific period of time.

### REVIEW OF RELATED LITERATURE

This review of empirical research studies and theoretical work on content analysis applied to LIS aims to illustrate briefly the methodological differences in these studies. Further, in juxtaposing the studies selected, attention is drawn to methodological features found particularly valuable in regard to the research design of the present project.

LIS literature is rich in statistical analyses of published LIS research, and content analyses have been used to reveal characteristics of a predefined body of literature in the field. Busha & Harter (1980, p. 171) defined content analysis as "a procedure designed to facilitate the objective analysis of the appearance of words, phrases, concepts, themes, characters, or even sentences and paragraphs contained in printed or audiovisual materials." Content analysis, which is derived from the social sciences, is "a research technique for the objective, systematic, and quantitative description of manifest content of communication" (Berelson, 1952, p. 74). However, Allen and Reser (1990) who analyzed the use of content analysis in LIS literature, found that definitions of this investigative approach are diffuse and imprecise and point out that "there is considerable ambiguity (not to say confusion) about the meaning of the term 'content analysis' in library and information science" (p. 253). They distinguish between "classification analysis," a method which "assigns documents (or other means of communication) to classes or categories to quantify one or more of their characteristics" (p. 253), and "elemental analysis," which is based on the recording of word or word group frequencies from these documents. Content analysis is a qualitative method and has its strengths and weaknesses. Developing an appropriate content classification scheme is an important step and researchers must be aware that "the categories chosen should be exhaustive, mutually exclusive, clearly defined, and conceptually valid in relation to the research question" (p. 257). Similarly, Busha and Harter (1980) warn that

Unless categories of analysis are clearly and accurately defined and the classification and measurement of data are undertaken with objectivity, exactness and rigor, a so-called content analysis can produce loosely knit or meaningless data (p. 174).

Allen and Reser (1990) discussed the bias factor involved in "classification analysis" which is performed largely as a subjective process. Nevertheless, they

conclude that, if employed in a disciplined manner, content analysis can be applied fruitfully to address a multiplicity of issues in LIS research.

Peritz (1980) examined research papers that had appeared in 39 library journals from 1950–1975. She characterized and classified the research methodologies used and looked at the type of library (or other organization) investigated, the authors' institutional affiliation, and possible trends in research during the period of investigation. Nour's study (1985), modelled on Peritz, explored the topics researched and methodological features of studies published, during 1980, in 41 core library journals. Feehan, Gragg II, Havener, and Kester (1987) analyzed issues and trends in LIS research published in English-language journal articles during 1984. The characteristics that they investigated include the subject dispersion of research activities and the type of libraries on which the research centers. Harter & Hooten (1990), in their analysis of information science publications, modified the classification scheme developed by Feehan et al. (1987). Atkins (1988) reported a unique and, in some respects, rather sophisticated analysis of the subject trends in LIS research from 1975 to 1984. His study examining a total of 2,705 LIS articles breaks away from the conventional approach to subject analysis of LIS research, namely the investigator's reliance on a pigeonhole system based on rigid predefined categories. He adopts the alternative approach of permitting the articles selected for the analysis to "speak for themselves" in terms of subject determination. This is done by compiling a list of subjects based on a rigorous inspection of each journal item included in the analysis.

Buttlar (1991), who analyzed 16 library periodicals between 1987 and 1989 using Atkins' subject approach, attempted to illuminate a wide variety of characteristics pertaining to American LIS periodical literature. Buttlar recorded the page length of each article identified. The recorded number of pages per article became a measure in the analysis of subject coverage and used for calculating the percentage of pages devoted to a total of 130 identified subjects (p. 47).

Grover, Glazier, and Tsai (1991) analyzed the structure and content of recent research (for a five-year period, 1981–1985) published in LIS refereed journals as an indication of the maturity of LIS as a discipline. Chu and Wolfram (1991) reviewed Canadian LIS research between 1960 and 1988 using content analysis as a vehicle for identifying the different areas of LIS research concentration in Canada and for examining various other aspects. Houser (1988) used content analysis in his conceptual analysis of the first 15 volumes, 1974–1984, of the *Journal of the American Society for Information Science (JASIS)*. Cline (1982), in her study of the publications appearing in *College & Research Libraries* from 1939 through 1979, also performed a subject analysis using a modified version of the classification scheme developed by Saracevic and Perk (1973).

Saracevic and Perk (1973) performed a pioneering study of the literature of librarianship as reflected in the indexing service *Library Literature* for 1967. Without distinguishing between research publications and non-scholarly material they examined the subject dispersion of the literature and grouped the periodical items according to types of libraries covered.

Cooper (1987) studied articles published in three leading library journals in Mainland China during 1985, and compared the domestic periodical literature with reports on the current library scene published in the West. He coupled a "conventional" subject classification approach with a content analysis methodology looking at

such aspects as the focus of attention of journals, the stage of development of scholarship in the light of the journals surveyed, and stylistic features of the journals.

The majority of studies discussed, so far, are of North American origin but a recent bibliometric study (Raptis, 1992) shifted the focus and broadened the research base. The material analyzed is drawn from five international librarianship journals, mainly ones with a research focus, and covers the subject of the articles. A number of Nordic empirical studies of LIS research rely on content analysis. Thus, Järvelin and Vakkari (1990) based their "prototype" analysis of the subject distribution and various other aspects of international research in the LIS on a sample of 833 papers that appeared in thirty-seven core LIS journals published in 1985. Järvelin and Vakkari (1992, 1993) offered a synthesis of subject classification data contained in the findings of three individual studies of international LIS research, Järvelin and Vakkari (1990), Kumpulainen (1991), and Huusko (1991).

The family of Nordic studies based on the subject classification and conceptual framework adopted by Järvelin and Vakkari (1990) also includes a content analysis of LIS research in Denmark, Finland, Norway, and Sweden covering 1965 to 1989 (Aarek, Järvelin, Kajberg, Klasson, & Vakkari, 1992, 1993). Kajberg (1991) examined Danish LIS research between 1965 and 1989 and Klasson (1990) analyzed the contents of Swedish LIS research publications 1900–1988.

The review of major studies concerned with content analysis of specific segments of LIS literature indicates a marked bias towards analyzing the research-oriented part of the discipline's literature production. Non-research publications—that is, the mainstream contributions to the library press, and the practitioner-oriented items including descriptive items and pieces of the opinion paper-type—have only received scant attention. There is a paucity of studies using content analysis to examine professional writings that lack a distinct research dimension.

## THEORETICAL FRAMEWORK

The present study is rooted in the basic assumption that a profession and discipline can be studied by analyzing its published record. According to this approach, the published material of LIS, primarily articles in library literature, is a representative mirror of the development, the state-of-the-art and the theoretical foundations of LIS as well as indicates librarians' and information workers' professional thinking, practice and priorities. Theoretical support for this viewpoint derives from Paul Wasserman's *The New Librarianship. A Challenge for Change* (1972), especially Chapter 7 on the influence of education and library literature: "the ideology and the intellectual base of a discipline is revealed in the pages of its journals and of its books, for the media of the profession serve as a compelling vehicle for conveying swiftly and widely new ideas and insights" (p. 150). His mirror theory is a relevant and applicable investigational approach for this study. His line of thought is supported by Mittermeyer and Houser (1979), who argue that "the literature of a discipline is or becomes the discipline itself" (p. 257). Schrader and Beswick (1989) state that "Hence, a field is not only related to its literature, but it is reflected in that literature as well, and all problems and issues of importance to a field will be documented in its literature" (p. 7). Windsor and Windsor (1973) simply maintain that "the knowledge bank of any field is its published literature" (p. 377). Similarly, Feehan et al. point out that "the subject concerns of a discipline are nowhere better

reflected than in its research literature" (p. 174). Cline (1978) asserted that "the intellectual base of any discipline is revealed in its journal literature which serves, among other things, as a vehicle for disseminating information, introducing innovations, and reporting the findings of research in the field" (p. 1). Buttlar (1991) stresses the value of periodic analysis of the subject content of LIS literature and its producers, and among other things, observes that "it reflects trends in the concerns and issues that concern and confront library and information science educators and practitioners" (p. 52).

### METHODOLOGY

To facilitate the identification and comparison of occurrences of subjects as well as shifts in subject coverage in the LIS over the study period, it was decided to divide the period under examination into three equal 10-year intervals, namely 1957–1966, 1967–1976, and 1977–1986.

Content analysis serves as a tool for determining and ranking the LIS subjects of growing or diminishing importance over a given period of time. Obviously, there is a risk that bias, however subtle it might be, creeps in when the researcher who acts as an indexer in this case is coding the input material (i.e., the weaknesses and pitfalls relating to content analysis as an investigative method addressed in the literature review of this study). But to minimize bias and ensure consistency in the process of interpreting the classification scheme and assigning its codes to source publications, source articles representing "problem cases" received special attention in that the assigned categories were checked against the indexing of the same input articles in relevant national indexing services. Some of the classification judgments made by the present researcher and exposed to testing in this way were consolidated or questioned by this procedure, resulting in a changed coding of the input material in a few cases.

The source material to be subjected to further analysis was derived from 10 Danish and joint Nordic LIS periodicals: *Bibliotek 70*, *Bibliotekaren*, *Biblioteksarbejde*, *Bogens Verden*, *DF-Revy*, *Skolebiblioteket*, *Nordisk Tidskrift för Bok och Biblioteksväsen*, *Scandinavian Public Library Quarterly*, *Reol* and *Tidskrift för Dokumentation*. Every issue of each periodical was examined and articles identified for analysis.

The LIS journals contributing the data that form the basis of this study constitute the core of serial publications in Danish LIS. The serial publications selected for analysis are the major professional media accounting for the vast majority of periodical items authored by members of the Danish LIS community. Non-Danish LIS journals have only marginal significance in the overall picture of professional communication in the LIS field in Denmark. The number of pre-1986 LIS articles by Danish authors that have appeared in journals issued in other countries is negligible. However, three Nordic LIS journals have for many years served as additional professional and scholarly communication channels for papers prepared by members of the Danish LIS profession. *Nordisk Tidskrift för Bok- och Biblioteksväsen* (*Nordic Journal of Librarianship and Historical Bibliography*) (1913- ) has a pronounced research and academic library profile whereas *Tidskrift för Dokumentation* (*The Scandinavian Documentation Journal*) (1944- ) is targeted at a community of practitioners in special libraries, documentation centers, and information services in

industry and commerce in the Nordic countries. *Scandinavian Public Library Quarterly* (1968- ), publishing articles solely in English can be considered the showcase of Nordic public librarianship because of its emphasis on presenting new public library services and the design of new public library premises. *Reol (Bookcase)* (1962-67), which has ceased publication, was devoted to both practice-oriented public library problems and theoretical issues in public librarianship. Many leading professionals from the Danish LIS world have contributed papers to the Nordic journals, mainly writing in their mother tongue.

Only substantive source articles were selected for the content analysis. Articles authored by foreigners and published in the Danish LIS periodicals, either in translated versions or in their original language, were also included. Book reviews, letters to the editor, short opinion pieces, editorials, bibliographies and news items such as announcements, awards, biographies, new positions, and retirements, as well as membership lists, directories, etc. were excluded.

Each article was classified by subject and library type using a specially developed hierarchical classification scheme based on the scheme devised by Feehan et al. (1987); the classification scheme appears in Appendix II. Each source article was also classified according to the seven categories of LIS agency types: (1) Academic and Research (including national libraries), (2) Public, (3) School, (4) Special, (5) Multi-type, (6) Non-library Setting, and (7) Not Applicable. These categories, which are exhaustive and mutually exclusive, are borrowed from Feehan et al. Types of library were treated separately as a special set of categories.

To cope with multiple subject publications—cases in which two or more categories seem equally applicable to a publication—it was decided to imitate Atkins' approach: the assigning a primary and, if necessary, a secondary subject category, to source articles. Both categories of subject are of equal weighting in the data analysis. Thus, each source article was classified under one or two headings. The number of periodical articles which have been classified using a primary notation totals 2,844; those articles which have been further assigned a notation indicating a secondary subject number 1,259. Overall, class numbers from the scheme were used 4,103 times during the subject analysis.

As with the Atkins study (1988), there was a distinction between occurrences of primary and secondary subjects in the tables. However, in the presentation of the results of the classification, and the interpretation of the figures appearing in tables, this separation between the two categories of subjects will be ignored.

In the content analysis of LIS serial literature subjects were analyzed by the total percentage of pages of coverage each represented. Thus, the basic unit of measurement used for gathering the data for the subject analysis is the length of each article. This measure was preferred to a simple count of the articles themselves since the actual length of articles expressed by the number of counted pages provides a more appropriate and exact measure for determining the weight of the various subject categories displayed by the classification scheme. The page count method works in this way: (1) the page counts for primary and secondary subjects in each classification category (i.e., class) in a given time span are summed, and (2) the percentage of pages represented by each subject category is computed on the basis of the summed page figures. For example, the total of pages related to class 240, Manpower, as primary subject in 1957–1966 is 11 and the total of pages belonging to the same category in the same period, but as secondary subject, is 9. Added together, the two

figures become 20. This sum provides the basis for computing the overall score or percentage of class 240 during the mentioned time period. The percentage, or overall score, for class 240 is then computed on the basis of the totality of pages related to primary *and* secondary subjects for that period, that is, the figures for primary and secondary subjects *in all classes* added together for 1957–1966 (a total of 3,101 pages).

The above data on periodical articles including the subject classification details and the recorded page length for each item were entered in a specially developed source file for sorting according to subject categories and for doing the frequency distributions analysis. Counting of the articles in each subject category was done by searching the project database. Data analysis was done on both primary and secondary subjects and on the frequency of primary and secondary subjects in each subject category as a sum, that is, added together. The total percentage was calculated and entered in the relevant “total” space of Appendix I.

### SUBJECT DISPERSION OF LIS ARTICLES, 1957–1986

Table 1 lists the selected Danish and Nordic LIS periodicals and the relative proportion of the total amount of material analyzed for the present study measured in terms of articles and pages. Two periodicals, *Bibliotek 70*, published by the Librarians' Union, and *Bogens Verden*, the official journal of the Danish Library Association,

**TABLE 1**  
The Number Of Articles and the Amount Of Material  
Per LIS Journal Studied 1957–1986

| Journal   | Articles |      | Pages  |       | # of Pages per Article |
|---|----------|------|--------|-------|------------------------|
|   | #        | %    | #      | %     |                        |
| <i>Bibliotek 70</i>                                   | 1,033    | 36.3 | 2,941  | 23.1  | 2.8                    |
| <i>Bogens Verden</i>                                  | 1,244    | 43.7 | 4,928  | 38.7  | 4.0                    |
| <i>Scandinavian Public Library Quarterly*</i>         | 120      | 4.2  | 765    | 6.0   | 6.4                    |
| <i>DF-Revy</i>  | 102      | 3.6  | 455    | 3.6   | 4.5                    |
| <i>Skolebiblioteket</i>                               | 95       | 3.3  | 479    | 3.8   | 5.0                    |
| <i>Biblioteksarbejde</i>                              | 78       | 2.7  | 1,467  | 11.5  | 18.8                   |
| <i>Bibliotekaren</i>                                  | 65       | 2.3  | 506    | 4.0   | 7.8                    |
| <i>Reol*</i>  | 40       | 1.4  | 627    | 4.9   | 15.7                   |
| <i>Tidskrift för Dokumentation*</i>                   | 38       | 1.3  | 182    | 1.4   | 4.8                    |
| <i>Nordisk Tidskrift för Bok och Biblioteksvesen*</i> | 29       | 1.0  | 395    | 3.1   | 13.6                   |
| Total   | 2,844    | 99.8 | 12,745 | 100.1 | 4.5                    |

Note. \*Nordic journals.

are large-scale contributors of source articles for the subject analysis; they provide 80% of all articles, but only 62% of the page count. Further, the four Nordic journals account for 15.4% of the total page material. Data compiled on the amount of pages contributed by each journal also permitted computing the number of pages per article, that is, determining the size of the average article in each of the journals listed. Great variations in terms of page length were noted; while articles published by *Biblioteksarbejde*, an independent, scholarly journal concerned with the theory-practice interface in librarianship, and *Reol* are the lengthiest ones (18.8 and 15.7 respectively), the average article appearing in *Bibliotek 70* is very brief (2.8).

Appendix I illustrates the distribution of source documents across the LIS topics overall for 1957 through 1986, that is, during the 30 years of this study.

### 1957-1986

Table 2 illustrates the 10 most popular subjects from 1957 to 1986. Distinct trends and patterns are discernible. Above all, one class stands out from the rest, Specific Regions and Countries (131), that is, broad profiles of individual libraries/library systems, or reports on national library scenes of specific countries. Such items account for at least 9.3% of the total material listed. Also, there is a heavy concentration on three other subjects: Materials/Collections (470), which ranks as second (6.8%), Buildings and Equipment (480, 5.6%), and Administration and Management (410; 4.7%). The subjects of Cooperation, Networks and Resource Sharing (490, 4.5%), and Education for Librarianship (3.6%) have attracted considerable attention as well. Striking too is the heavy interest shown in Multi-Media (471, 4.2%). The unclassifiable/miscellaneous category (600), which is for the group of

**TABLE 2**  
**Distribution Of Coverage**  
**By Ten Most Popular Subjects 1957-1986**

| Rank | Topics  | Primary<br>Topic % | Secondary<br>Topic % | Total<br>% |
|------|---|--------------------|----------------------|------------|
| 1    | 131 Specific Regions and Countries                | 9.1                | 9.9                  | 9.3        |
| 2    | 470 Materials/Collections                         | 7.0                | 6.4                  | 6.8        |
| 3    | 480 Buildings and Equipment                       | 6.7                | 3.2                  | 5.6        |
| 4    | 410 Administration and Management                 | 4.5                | 5.2                  | 4.7        |
| 5    | 230 Cooperation, Networks and<br>Resource Sharing | 3.6                | 6.3                  | 4.5        |
| 6    | 471 Multi-media                                   | 3.9                | 4.9                  | 4.2        |
| 7    | 600 Unclassifiable; Miscellaneous                 | 5.6                | -                    | 3.8        |
| 8    | 230 Education for Librarianship                   | 4.7                | 1.3                  | 3.6        |
| 9    | 460 Automation of Library Processes               | 3.0                | 4.2                  | 3.4        |
| 10   | 221 Library Policy                                | 2.8                | 4.1                  | 3.2        |



articles dealing with fringe areas not covered by the classification scheme or includes items on genuinely multiple subjects, accounts for 3.8%. Library History (110) which has a fairly strong tradition in Denmark, not least within the research and academic library community, has also influenced LIS periodical publishing over the years and has a share of 3.1% of the total volume of LIS serial literature. Notable too is the weight of subjects labelled "Special Services." Individually, these topics do not loom large but in the aggregate classes 423 through 429, which range from Children's Librarianship (3.2%) through Services to Special Categories of Users (2.6%) to Other Subjects (including the libraries' role in adult education and bookmobile services) (1.1%), account for 10.3% of the material examined.

The distribution of LIS serial literature on the various topics shows a characteristic concentration on a few dominating subjects. In fact, the six largest themes account for more than one third of the material represented by the total population of source articles. The significance and dominant position of a few spectacular subjects during the whole period under consideration is even more pronounced during the first 10 years, 1957–1966. The five largest themes account for nearly half of the source material of this 10-year block.

### **1957–1966**

The subject coverage emerging from the statistical distributions relating to 1957–1966 is clearly dominated by one topic, Specific Regions and Countries (131), or "library tourism," that is, profiles of individual library systems and reports on the system of libraries of specific countries. This material accounts for 16.6%. Similarly, the preponderance of the subject of Library Architecture (480) is especially conspicuous during the first 10-year block (12.9%), while the popularity of Administration and Management (410, 6.7%) and Cooperation, Networks and Resource Sharing (490, 7.0%) is also marked. Very surprising is the complete lack of interest in the area of Library Policy (221). Art Libraries and Librarianship (425) has attracted no interest during the first decade.

A plausible explanation is that the idea of offering a special service concerned with the provision of art literature, paintings, graphics, slides and other sorts of art materials via public libraries was still unfamiliar to the Danish public library community in the 1950s and early 1960s. This interpretation is supported by the fact that a bibliography of Danish public library literature, 1950–1960, (Sandau, Stenkilde, & Rønnow Torp, 1975) lists no pre-1969 references to articles on art libraries. No occurrences were recorded for class 260 (Research). This observation signifies a very low awareness of research issues and the idea of applying scientific inquiry to library-related phenomena within the library community then. Education for Librarianship (230) and Materials/Collections (470) both have a fairly large share of the total population of source articles during the first 10 years (5.3% and 4.7% respectively). Table 3 indicates the 10 most popular subjects from 1957–1966.

No less interesting are the many lacunas or black spots in the professional universe mirrored by the LIS literature of the first 10 years. There is, for instance, the virtual absence of published material within main class 3, namely Theoretical Aspects of Information. Occurrences were noted only for subclasses 350 and 360. Furthermore, relatively little attention has been given to such areas as International and Comparative Librarianship (130, 0.5%), Free versus Fee Discussion (222, 0.4%),

**TABLE 3**  
**Distribution Of Coverage**  
**By Ten Most Popular Subjects 1957–1966**

| Rank | Topics |   | Primary<br>Topic % | Secondary<br>Topic % | Total<br>% |
|------|--------|---|--------------------|----------------------|------------|
| 1    | 131    | Specific Regions and Countries                | 12.5               | 28.0                 | 16.6       |
| 2    | 480    | Buildings and Equipment                       | 16.4               | 3.6                  | 12.9       |
| 3    | 490    | Cooperation, Networks and<br>Resource Sharing | 5.2                | 12.1                 | 7.0        |
| 4    | 410    | Administration and Management                 | 6.8                | 6.5                  | 6.7        |
| 5    | 230    | Education for Librarianship                   | 6.7                | 1.4                  | 5.3        |
| 6    | 470    | Materials/Collections                         | 5.7                | 2.2                  | 4.7        |
| 7    | 427    | Services to Special Categories<br>of Users    | 3.0                | 4.7                  | 3.4        |
| 8    | 411    | Library Users                                 | 4.3                | 1.0                  | 3.4        |
| 9    | 220    | Legislation                                   | 3.5                | 1.8                  | 3.1        |
| 10   | 423    | Services to Children and Youth                | 3.4                | 1.7                  | 3.0        |

and Continuing Education (231, 0.5%). There is also a paucity of material classified under some of the headings of main class 5 (Related Fields).

#### 1967–1976

A notable feature of the distribution patterns relating to the second 10-year period, 1967–1976, are the increasing percentages of some of the topics belonging to the umbrella category “special services.” This is especially true of Art Libraries (425), which had no occurrences during the first interval and Hospital Libraries (426), which doubled its share (from 0.5 to 1.0%). Another characteristic of this period is the dramatic increase in such topics as Libraries and Society (120; from 0.3 to 1.3%), Library Policy (221; from 0.0 to 2.5%), Ethics, Censorship and Intellectual Freedom (270; from 0.1 to 0.5%), Public Services (420; from 0.0 to 1.1%), Cultural Activities (428; from 0.5 to 2.7%), Acquisitions (431; from 0.5 to 2.0%), Indexing and Abstracting (434; from 0.1 to 1.1%), Systems (450; from 0.0 to 1.4%), Automation of Library Processes (460; from 0.3 to 4.3%), Materials/Collections (470; from 4.7 to 6.9%), and Multi-Media (471; from 1.3 to 4.8%). Some of these subjects behave very dynamically and deserve the label “boom topics” (Atkins). Table 4 illustrates the ten most popular subjects from 1967 to 1976.

#### 1977–1986

A look at the lines of development characterizing LIS articles publishing during the third 10-year span, 1977–1986, reveals distinct stagnation in such areas as Specific Regions and Countries (131), Organization of Knowledge and Information (350), Ad-

**TABLE 4**  
**Distribution Of Coverage**  
**By Ten Most Popular Subjects 1967-1976**

| Rank | Topics  | Primary<br>Topic % | Secondary<br>Topic % | Total<br>% |
|------|---|--------------------|----------------------|------------|
| 1    | 131 Specific Regions and Countries                | 8.8                | 10.4                 | 9.4        |
| 2    | 470 Materials/Collections                         | 7.6                | 5.4                  | 6.9        |
| 3    | 480 Buildings and Equipment                       | 6.4                | 2.6                  | 5.1        |
| 4    | 471 Multi-media                                   | 4.4                | 5.6                  | 4.8        |
| 5    | 410 Administration and Management                 | 4.6                | 4.9                  | 4.7        |
| 6    | 490 Cooperation, Networks and<br>Resource Sharing | 4.9                | 4.2                  | 4.7        |
| 7    | 423 Services to Children and Youth                | 5.2                | 2.7                  | 4.4        |
| 8    | 460 Automation of Library Processes               | 2.7                | 7.4                  | 4.3        |
| 9    | 600 Unclassifiable; Miscellaneous                 | 5.4                | -                    | 3.6        |
| 10   | 230 Education for Librarianship                   | 4.0                | 0.9                  | 3.0        |

ministration and Management (410), Acquisitions (431), Cultural Activities (428), Processing (430), Cataloging (432), Buildings and Equipment (480), Cooperation, Networks and Resource Sharing (490), and Historical Bibliography (530). Other topics with markedly declining totals from 1977 to 1986 are the group of special services subjects including the libraries' role in adult education and bookmobile services.

The subjects that can be identified as definite growth areas during the third 10-year block comprise Library History (110; increasing from 2.4 to 3.7%); Library Policy (221), which grows from 2.5 to 4.7%; Research (260), which doubles and totals 0.9%; Reference Services (421) which doubles as well and reaches a share of 3.4%; Classification (433), which shows an increase from 0.7 to 1.7%; Published Materials (511; increasing from 1.5 to 2.7%); Information Technology (570) reaching its peak figure (2.7%); and the unclassifiable/miscellaneous category (600), which grows from 3.6 to 4.8%. Table 5 illustrates the 10 most popular subjects.

Looking at main class 3, the group encompassing the information science-related core areas, those subjects that are largely concerned with the theoretical basis of LIS, it appears that these subdisciplines have attracted a growing interest from members of the library profession during the late 1970s and the 1980s. As a whole, this group of subjects has consolidated its position, and the figures of the last 10-year block indicate that the share of the 300 class subjects has increased from 1.8 to 2.8%.

#### INTERPRETATION OF THE RESULTS OF THE SUBJECT ANALYSIS

On the whole, the figures given in Appendix I indicate that Danish LIS publishing, as reflected in the profession's periodical literature, is heavily concentrated on the "traditional" library-oriented areas and activities, those with immediate practical

**TABLE 5**  
**Distribution Of Coverage**  
**By Ten Most Popular Subjects 1977–1986**

| Rank | Topics  | Primary<br>Topic % | Secondary<br>Topic % | Total<br>% |
|------|---|--------------------|----------------------|------------|
| 1    | 470 Materials/Collections                         | 7.0                | 8.0                  | 7.4        |
| 2    | 131 Specific Regions and Countries                | 8.0                | 4.9                  | 7.0        |
| 3    | 471 Multi-media                                   | 4.8                | 4.9                  | 4.8        |
| 4    | 600 Unclassifiable; Miscellaneous                 | 7.0                | -                    | 4.8        |
| 5    | 221 Library Policy                                | 4.4                | 5.3                  | 4.7        |
| 6    | 410 Administration and Management                 | 3.7                | 5.0                  | 4.1        |
| 7    | 110 Library History                               | 3.8                | 3.5                  | 3.7        |
| 8    | 490 Cooperation, Networks and<br>Resource Sharing | 2.4                | 6.1                  | 3.6        |
| 9    | 460 Automation of Library Processes               | 4.2                | 3.4                  | 3.6        |
| 10   | 480 Buildings and Equipment                       | 3.6                | 3.5                  | 3.6        |

implications, whereas the theoretical, instrumental, and behavioral dimensions of information communication processes have received only scant attention. There is a heavy concentration on library services (e.g., children's librarianship) and the services offered to special library user groups, and a considerable interest in the operation-centered aspects of library work. Furthermore, there seems to be a heavy emphasis on the selection and acquisition of library materials, both printed materials and audio-visual media, and some interest in the production and publication of the materials. Library architecture, including space planning, layouts and design of library buildings, and the legislative framework of public libraries, are other issues that have been frequently addressed in the library literature. In addition, there has been considerable awareness of the organizational and administrative aspects of librarianship. The subject distribution patterns also reflect the significance of unionization in Danish librarianship. The occurrences of articles treating union-related issues illustrate the importance of the Librarian's Union during the decades under consideration. Judging from the increased attention received by union matters in the last 10-year block, the impact of the Union on developments in the library profession grows from the late 1970s to the mid-1980s. The results of the subject categorization process also illuminate the popularity of issues dealing with cooperation and joint schemes in the library field, the national library network and its various links, and the relations between different types of libraries (e.g., school vs. public libraries) in the library literature. This finding confirms the long tradition of resource sharing and interlibrary lending in Denmark that involves practically all types of libraries.

Processing (430) reached its peak figure during the first interval, 1957–1966 (2.5%). This culmination seems to indicate that the publishing of a nationwide study on rationalization, work simplification, efficiency, and performance measurement in

public libraries (*Work Simplification in Danish Public Libraries*) in 1964 generated a considerable interest in work simplification and technical processes among library professionals in the mid-1960s. This concern apparently manifested itself in a significant number of articles focussing on work simplification in public libraries.

Automation of Library Processes (460) peaked at 4.3% during the second interval, 1967–1976. This percentage represents a dramatic increase from the previous decade and obviously part of the explanation for this growth is to be found in the paucity of writings on the application of computers in libraries in previous years. It should be remembered that library automation was still in embryonic form during the late 1960s. But in spite of this reservation there seems to be little doubt that Library Automation's culmination within this 10-year block can be seen as a reflection of the FAUST controversy that pervaded the public library community so heavily in the 1970s. FAUST, an ambitious multi-dimensional national automation system born of the prevailing centralization and standardization philosophy in the public library sector in 1971, was heavily discussed in the public library community in the 1970s and met with fierce opposition from many professionals and trade unionists. This interpretation becomes even more plausible when coupled with the observation that the related subcategory Systems (that is, specific automated systems, national or regional, designed for use in libraries) (450) reaches its the peak figure (1.4%) in the same time span. Library Automation (460) is a "boom topic" during this decade. Automation declines a little (from 4.3 to 3.6%) in the third 10-year block but the interest in library automation matters continues during this time span. This continuing interest may signify permanent critical concern with automation efforts in public libraries.

The results of the subject analysis also confirm the almost total lack of interest in issues pertaining to the status and prestige of the library profession in society and within the hierarchy of professions. Unemployment matters received extensive coverage in the late 1970s and 1980s in the union periodical *Bibliotek 70*. Findings suggest that traces of this concern with unemployment among librarians exist in the percentages relating to two topics: Unions (211) and Manpower (240). Both subjects have gained ground during 1977–1986.

There are no immediate explanations for the popularity of Administration and Management (410) peaking at 6.7% in 1957–1966. One of the factors that might have affected the publication output relating to Administration and Management within the first 10-year block is the interest in reports and developments abroad, especially in Great Britain and the United States, dealing with themes of an organizational and administrative nature. Thus, *Reol*, the Nordic public library journal, which had a scholarly profile, carried several articles on such themes during the early and mid-1960s. Some of these, often rather voluminous, papers were authored by leading foreign professionals and published in translated versions. Also published in *Reol* at this time were a few substantial articles on library administration matters that are revised versions of papers prepared in the context of the Scandinavian School of Librarianship, the joint advanced courses that took place in Kungälv in Sweden. Implicit in Administration and Management's declining, although still considerable, proportion of the volume of published material during 1967–1976 is the effect on the overall output of a series of reports issued by the State Inspectorate of Public Libraries on the publication output. The reports covering such themes as organizational planning, participative management, and work studies in public libraries were

issued after 1970 and stirred lively discussion within the public library community. Another factor that also deserves attention in this context is the growth of Public Relations and promotion activity in public libraries that attracted some interest during the late 1960s. Public Relations as a topic has been grouped with Administration and Management (410). However, the data analyzed show that Administration and Management (410) are among the members of a group of subjects that have declined steadily over the whole period of examination.

A major leap for the years 1967–1976 can be recorded for Indexing and Abstracting (434), which moves from 0.1% during the first decade considered to 1.1% in the subsequent 10 years. Part of the growing interest in this subject may be traced to an increasing interest in and debate on PRECIS indexing which flourished during 1974–1976.

Library Legislation (220) peaks during 1957–1966. The heavy concentration of interest on legislative matters during this time is a reflection of the influence of the far-reaching and epoch-making 1964 Public Library Act, which paved the way for a unique development and extension of public library service in Denmark. Preparation for the 1964 Act and the detailing of its implications and potentials generated a considerable interest in library law within the public library community, which can be traced in the pages of the existing library periodicals. The overwhelming attention devoted to Buildings and Equipment (480) during 1957–1966 bears witness to the strong position of the physical environment and library space planning in the thinking, priorities, and activities of the library profession in the 1950s and 1960s. It was in the optimistic years of the emerging Welfare State, and the climate of an emerging affluent society which encouraged the planning and projecting of libraries. In addition, “reviews,” often very detailed, of new library premises have for many years been a regular feature of the contents of the Danish library press.

Worth noting is the position of Specific Regions and Countries (131), which ranks first on the list of subjects figured in the 1957–1966 block. The many occurrences of this topic, which is extremely well covered over the whole period studied, signal a significant awareness on behalf of the Danish library community of trends and developments in librarianship in other countries. However, it should be remembered that class 131 is not solely confined to profiles of foreign libraries and national library scenes in other countries—descriptions of individual Danish libraries and coverage of Denmark as a national library system are included as well. Hence, it is no matter for surprise that the accounts of Danish libraries and library networks dominate the picture.

Study results reveal that the two leading subjects from the first 10 years: Buildings and Equipment (480) and Specific Regions and Countries (131) lose ground very markedly during the second decade, but the erosion of their basis continues from 1977 to 1986.

The significant volume of published material concerned with education for librarianship during the first time span, 1957–1966, can undoubtedly be explained by the fact that the Royal School of Librarianship came into existence in 1957.

The large number of pages dealing with Materials/Collections (470), that is, library stock, that characterize the 10-year blocks, 1967–1976 and 1977–1986, reflect a continued heavy emphasis on and discussion of the procedures and policies of book selection as well as the presentation and “mediation” of the contents of collections to the library users.

No occurrences were recorded for library policy during the first 10 years, and subjects such as Libraries and Society and Ethics, Censorship and Intellectual Freedom received only scant attention during this span. However, this picture has completely changed during the subsequent 10 years. During the late 1960s and the early to mid-1970s the above subjects became more popular, and a trend towards greater concern with the political and social aspects of librarianship can be noted. Although a few of the above subjects tend to stagnate during 1977-1986, the group of topics concerned with Society (120), Policy Making (221), Community Information (grouped with class 421, Reference Services, which has doubled during 1977-1986), Unionization (211), Charging for Library Materials (222), and Censorship and Intellectual Freedom (270) consolidate its position during the last decade. The 1970s were a very turbulent decade in a political sense; the recession became a reality in 1973 and a harsher economic climate and cutbacks in the public sector affected the library profession, stirring a wide range of political questions and provoking a reaction from the Librarians' Union. Ample evidence on the post-1968 thinking of and attitudes adopted by leading members the Union can be found in the Union periodical *Bibliotek 70*. Controversies over various issues in areas such as retrenchment measures, censorship in book selection, and charging for library services can be traced in parts of the library literature. The increase of library policy as a subject during 1977-1986 may, to some extent, be related to the appointment of the National Library Commission in 1976. The profession's expectations from the Commission's work and the actual results that are embodied in various interim reports and the final report which appeared in 1978 generated a vivid debate in both the public and the research library community. The debate has influenced the publishing activity in the LIS field.

### **THE DISTRIBUTION OF DANISH LIS PERIODICAL ARTICLES OVER LIBRARY TYPES**

The second characteristic examined as part of the content analysis of LIS serial literature is the type of library dealt with in the periodical articles. Table 6 presents the relative distribution. There is a clear concentration on public libraries. More than half of all LIS articles published during 1957-1986 (54.1%) centered on Public Libraries. Indeed, a look at all three 10-year divisions reveals that, apart from the last period distributions (1977-1986), Public Libraries are the type of libraries that account for over half of serial contributions. Nevertheless, although Public Libraries constitutes the most popular subject in LIS literature during all three 10-year periods articles on this library type drop off dramatically after 1976.

The large number of publications that treat public library-oriented themes is undoubtedly a reflection of the unique position of public libraries in Denmark and the massive and large-scale funding of this type of libraries for many years. Furthermore, it can be seen as a result of the strong and visionary legislative framework created for public libraries in 1964. Over the years the public library movement has also been backed by strong national bodies and agencies: the State Inspectorate of Public Libraries, the Danish Library Association, and the Danish Library Bureau. Besides, there have been strong and influential supporters and spokespeople of public library development in the political scene, in municipal contexts as well as in Parliament. Another explanation may be found in the educational sphere. The

Royal School of Librarianship, the dominating LIS education and research centre in Denmark, devoted the largest amount of its resources and considerable attention to the needs of public libraries during the first decades of its existence. The School's public library orientation obviously affected the composition of the workforce in LIS, and the production of graduates for a large and expanding job market in the late 1950s, 1960s, and early 1970s also led to the creation of a large public library community that was leading the fashion in professional discussion, policymaking and publishing.

The percentages in Table 6 clearly demonstrate that Public Libraries has by far outstripped the other types of libraries. This observation is especially true of the first 10-year period during which Public Libraries accounts for 68.8% of the total material. But publication output related to public libraries has been declining over the years, with the shrinking of the mass of public library-oriented articles especially noticeable after 1976.

Academic and Research Libraries, constituting about 6% percent of the library types published in LIS, is indeed a very modest share of the total material, and seems to be a fairly stable subject during the decades under consideration.

As can be seen in Table 6, school libraries were virtual *terra incognita* in the serial literature during the first 20 years, 1957-1976, but from 1977 onwards School Libraries as a subject has increased tenfold. However, this observation should be balanced by the fact that school libraries in some cases hide under the "umbrella" Multi-Type Libraries in that school libraries are often treated together with children's libraries which belong to the category of Public Libraries. But this reservation cannot conceal the fact that school librarianship which forms a quite separate and isolated branch of the library profession emerged as a field at a rather late stage in the development of the Danish library profession.

The interest in special library matters has always been modest, and special librarianship is a very marginal sphere of activity within the Danish library-informa-

**TABLE 6**  
**The Distribution Of Danish LIS Periodical Articles**  
**By Library Type 1957-1986**

| Types of Library      | 1957-1966<br>% | 1967-1976<br>% | 1977-1986<br>% | Total % |
|-----------------------|----------------|----------------|----------------|---------|
| Academic and Research | 6.5            | 6.8            | 6.2            | 6.4     |
| Public                | 68.8           | 62.9           | 44.4           | 54.1    |
| School                | -              | 0.5            | 5.5            | 3.1     |
| Special               | 3.2            | 1.8            | 2.1            | 2.2     |
| Multi-type            | 7.7            | 5.0            | 9.0            | 7.6     |
| Non0Library Setting   | 4.3            | 10.5           | 14.3           | 11.4    |
| Not Applicable        | 9.5            | 12.4           | 18.5           | 15.2    |
| Totals                | 100.0          | 99.9           | 100.0          | 100.0   |



tion profession. Further, as illustrated in Table 6, it has declined in coverage between 1957-1966 and 1977-1986.

### DISCUSSION

The examination of the popularity of the two non-library categories over time reflect some interesting patterns. They are both decided growth areas; Non-Library Settings, which can be briefly defined as physical contexts and organizational frameworks in LIS other than libraries, for example, the Royal School of Librarianship, the Librarians' Union or the Danish Library Bureau, and Not Applicable which designates the absence of any institutional or organizational context are really booming from 1966 onwards. The two categories tend to grow at the expense of the subject Public Libraries. The perceptible decrease in emphasis upon Public Libraries and the spectacular increase of the categories Non-Library Settings and Not Applicable mark a general shift in the LIS publishing community's interests. The increasing number of post-1966 LIS articles that cannot be grouped with a specific library type or several types of libraries might indicate that Danish LIS periodical publishing is gradually moving away from the "agency"- or institution-oriented approach. The ties to specific library types are gradually loosened in the treatment of topics in the professional literature. There seems to be a movement toward writings that deal more with operations, processes, and activities in LIS; publications seem to address more fundamental issues and approach phenomena of a more theoretical nature within the discipline during the period especially after 1976. It might be argued that the Danish library-information profession shows signs of increasing "maturity" during this phase of development.

On the other hand, a more cautious interpretation seems appropriate. The increasing amount of material categorized under the heading Not Applicable does not necessarily imply a progression within a practitioner-driven profession toward greater emphasis on theory development and a greater interest in the foundations of the LIS discipline. Evidence for supporting an assumption that the increased popularity of the category Not Applicable does not mean a decisive shift away from the dominance of the practical and technical aspects of librarianship is provided by the unchallenged and even strengthened position of the subjects pertaining to *library materials*, Audio-visual Media (471) and the literature of specific fields (511) (e.g., children's literature; see Appendix I). It appears that what can be broadly described as library-relevant materials and information resources—topics which might very well be addressed from a non-organizational perspective and treated in an institutional vacuum in the literature—are still at a premium within the profession during the time span 1977-1986. Furthermore, the contribution that can be expected from these topics to defining and developing the theoretical basis of information handling remains difficult to perceive.

The increasing number of articles that feature non-library institutions and organizations over the period under consideration reflects a growing preoccupation with the organizations, institutions, and associations of the library-information profession. This observation seems to confirm that Danish librarianship has for many years been "institution-bound." Institutions and associations such as the State Inspectorate for Public Libraries, the Danish Library Bureau, and the Danish Library Association have occupied a unique position in the Danish library landscape and influenced the development of library services. The growing importance of Non-Library Settings,

which is especially discernible during 1977-1986, also coincides with the slight increase of interest in union matters (class 211) noted in the last 10-year block (see Appendix I). This trend illustrates the continued, rather considerable, influence exerted by the Union on current library policy and professional thinking and activities.

The weight of the category Multi-Type, that is, the focus on several library types in an article, can, among other things, be viewed as an indicator of the awareness of or emphasis put on interlibrary relationships and joint schemes within the library sector at large. As can be seen in the Table 6, the viewpoint of several library types (Multi-Type) had a growing impact on current writing in the LIS field during the time period from 1977 to 1986.

### SUMMARY, CONCLUSION, AND SUGGESTIONS FOR FUTURE RESEARCH

The results produced by this investigation provide some insights into the major issues, trends, developments and influences in Danish LIS from 1957 to 1986. Overall, findings reveal strong concerns with the "traditional" areas and activities within the library-information profession. The practical nature of librarianship and action and current events oriented topics received the most emphasis whereas the theoretical and philosophical aspects of librarianship and the areas of information science received only very little attention.

More than any other type of library, public libraries have dominated library developments and professional activities. The evidence supporting this observation is clear: More than half of all LIS articles published during 1957-1986 centered on Public Libraries but articles on this library type drop off dramatically after 1976. The large number of publications addressing public library-oriented themes is undoubtedly a reflection of the unique position of public libraries in Denmark and the existence of powerful funding schemes supporting public library development.

The study was concerned with the identity or "anatomy" of Danish LIS. The results of this "self-analysis" provide an additional perspective on the profession's concerns and priorities in each of the three decades. The study results have generated some ideas for further research. They include conducting a follow-up study looking at the subject orientation of post-1986 LIS serial literature published in Denmark. The material to be processed for a study of this kind might be broadened to include journal articles (and papers in proceedings, collective works, etc.) by Danish authors appearing in professional literature published abroad. The inclusion of material published in international LIS sources could be justified by the rather dramatic growth of the volume of published LIS research of Danish origin during the 1980s and early 1990s. Danish LIS research has increasingly been disseminated via international printed sources. A significant part of the research output stems from the R & D-activities of the academic staff members of the Royal School of Librarianship (Kajberg, 1991).

Another idea to be pursued is to do parallel study concentrating solely on the LIS monographs, that is, books and reports, published in Denmark 1957-1986(95). The next stage of investigation naturally involves comparing the subject distributions emerging from the content analysis of LIS serial publications with the results of a future study of LIS monograph publishing. Special attention should be focussed on the similarities of the "behavioural characteristics" of the two bodies of literature and the areas in which they are asymmetric. Do the issues addressed by the serial

literature differ markedly from the topics covered by the monographic segment of published LIS sources?

The avenues to be explored in future research also include further analysis of the printed sources in the field. There is a dearth of empirical studies on the nature of and trends in LIS publishing in Denmark. No systematic attempt has been made so far to analyze the body of Danish LIS literature in general, considering all categories of media and publication formats, to determine its extent and evaluate the quality and quantity of the literature. A retrospective analysis of LIS publishing in Denmark of this type could be considered.

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## APPENDIX I

### The Distribution Of Danish LIS Periodical Articles By Topics, 1957-1986: Percentages

| Topics  | 1957-1966       |                   |       | 1967-1976       |                   |       | 1977-1986       |                   |       | 1957-1986       |                   |       |
|---|-----------------|-------------------|-------|-----------------|-------------------|-------|-----------------|-------------------|-------|-----------------|-------------------|-------|
|   | Primary Subject | Secondary Subject | Total | Primary Subject | Secondary Subject | Total | Primary Subject | Secondary Subject | Total | Primary Subject | Secondary Subject | Total |
|   |                 |                   |       |                 |                   |       |                 |                   |       |                 |                   |       |
| <b>1 General</b>                                |                 |                   |       |                 |                   |       |                 |                   |       |                 |                   |       |
| 110 Library History                             | 1.7             | 5.0               | 2.6   | 1.8             | 3.6               | 2.4   | 3.8             | 3.5               | 3.7   | 2.9             | 3.8               | 3.1   |
| 120 Libraries and Society                       | 0.4             | -                 | 0.3   | 1.1             | 1.8               | 1.3   | 0.7             | 2.3               | 1.2   | 0.8             | 1.8               | 1.1   |
| 130 International and Comparative Librarianship | 0.7             | -                 | 0.5   | 0.1             | 1.1               | 0.5   | 0.5             | 0.2               | 0.4   | 0.4             | 0.4               | 0.4   |
| 131 Specific Regions and Countries              | 12.5            | 28.0              | 16.6  | 8.8             | 10.4              | 9.4   | 8.0             | 4.9               | 7.0   | 9.1             | 9.9               | 9.3   |
| <b>2 Professional Concerns</b>                  |                 |                   |       |                 |                   |       |                 |                   |       |                 |                   |       |
| 210 Organizations and Associations              | 2.6             | 1.2               | 2.2   | 2.9             | 1.9               | 2.6   | 4.0             | 1.9               | 3.3   | 3.4             | 1.8               | 2.9   |
| 211 Unions                                      | 3.2             | 2.0               | 2.9   | 2.9             | 1.8               | 2.6   | 3.7             | 2.4               | 3.3   | 3.4             | 2.2               | 3.0   |
| 220 Legislation                                 | 3.5             | 1.8               | 3.1   | 1.5             | 0.8               | 1.3   | 1.1             | 1.9               | 1.4   | 1.6             | 1.6               | 1.6   |
| 221 Library Policy                              | -               | -                 | -     | 1.7             | 4.0               | 2.5   | 4.4             | 5.3               | 4.7   | 2.8             | 4.1               | 3.2   |
| 222 Free versus Fee Discussion                  | 0.4             | 0.5               | 0.4   | 0.1             | 0.4               | 0.2   | 1.1             | 0.9               | 1.0   | 0.7             | 0.7               | 0.7   |
| 230 Education for Librarianship                 | 6.7             | 1.4               | 5.3   | 4.0             | 0.9               | 3.0   | 4.3             | 1.6               | 3.5   | 4.7             | 1.3               | 3.6   |

**APPENDIX I (continued)**  
**The Distribution Of Danish LIS Periodical Articles By Topics, 1957-1986: Percentages**

| Topics  | 1957-1966                |                   |       | 1967-1976       |                   |       | 1977-1986       |                   |       | 1957-1986       |                   |       |
|---|--------------------------|-------------------|-------|-----------------|-------------------|-------|-----------------|-------------------|-------|-----------------|-------------------|-------|
|   | Primary Subject          | Secondary Subject | Total | Primary Subject | Secondary Subject | Total | Primary Subject | Secondary Subject | Total | Primary Subject | Secondary Subject | Total |
|   | 231 Continuing Education | 0.7               | -     | 0.5             | 0.2               | 0.5   | 0.3             | 0.2               | 0.3   | 0.2             | 0.3               | 0.3   |
| 240 Manpower                                  | 0.5                      | 1.1               | 0.6   | 0.7             | 0.7               | 0.7   | 0.5             | 2.4               | 1.1   | 0.5             | 1.6               | 0.9   |
| 250 Status and Image                          | -                        | -                 | -     | -               | 0.2               | 0.1   | 0.1             | 0.6               | 0.3   | -               | 0.4               | 0.2   |
| 260 Research                                  | -                        | -                 | -     | 0.5             | 0.2               | 0.4   | 1.2             | 0.2               | 0.9   | 0.8             | 0.2               | 0.6   |
| 270 Ethics, Censorship, Intellectual Freedom  | -                        | 0.5               | 0.1   | 0.7             | 0.2               | 0.5   | 0.3             | 0.8               | 0.5   | 0.4             | 0.6               | 0.4   |
| <b>3 Theoretical</b>                          |                          |                   |       |                 |                   |       |                 |                   |       |                 |                   |       |
| 310 General                                   | -                        | -                 | -     | 0.5             | 0.2               | 0.4   | 0.2             | 0.1               | 0.1   | 0.2             | 0.1               | 0.2   |
| 320 Information Science Theories              | -                        | -                 | -     | -               | -                 | -     | 0.1             | -                 | 0.1   | -               | -                 | -     |
| 330 Documentation                             | -                        | -                 | -     | 0.4             | 0.3               | 0.4   | 0.1             | 0.2               | 0.2   | 0.2             | 0.2               | 0.2   |
| 340 Structure of Knowledge and Information    | -                        | -                 | -     | 0.1             | 0.3               | 0.1   | 0.9             | 2.6               | 1.4   | 0.5             | 1.5               | 0.8   |
| 350 Organization of Knowledge and Information | 0.1                      | -                 | 0.1   | 0.7             | 1.3               | 0.9   | 0.5             | -                 | 0.3   | 0.5             | 0.4               | 0.5   |

|  |     |     |     |     |     |     |     |     |     |     |     |     |
|--|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 360 Dissemination and Retrieval of Information | 0.2 | -   | 0.2 | -   | -   | 0.4 | 1.5 | 0.7 | 0.2 | 0.8 | 0.4 |     |
| <b>4 Applied</b>                               |     |     |     |     |     |     |     |     |     |     |     |     |
| 410 Administration and Management              | 6.8 | 6.5 | 6.7 | 4.6 | 4.9 | 4.7 | 3.7 | 5.0 | 4.1 | 4.5 | 5.2 | 4.7 |
| 420 Public Services                            | -   | -   | -   | 1.3 | 0.8 | 1.1 | 0.9 | 0.8 | 0.9 | 0.9 | 0.7 | 0.8 |
| 421 Reference Services                         | 1.8 | -   | 1.3 | 1.6 | 1.6 | 1.6 | 3.7 | 2.7 | 3.4 | 2.8 | 2.0 | 2.5 |
| 422 Circulation                                | 1.9 | 0.6 | 1.5 | 0.5 | 1.0 | 0.7 | 0.8 | 1.0 | 0.8 | 0.9 | 0.9 | 0.9 |
| 423 Services to Children and Youth             | 3.4 | 1.7 | 3.0 | 5.2 | 2.7 | 4.4 | 2.5 | 2.7 | 2.6 | 3.4 | 2.5 | 3.2 |
| 424 Music Libraries                            | 3.0 | 1.0 | 2.5 | 2.5 | 1.9 | 2.3 | 0.3 | 0.1 | 0.2 | 1.4 | 0.8 | 1.2 |
| 425 Art Libraries                              | -   | -   | -   | 0.3 | 0.9 | 0.5 | 0.2 | -   | 0.2 | 0.2 | 0.3 | 0.2 |
| 426 Hospital Libraries                         | 0.7 | -   | 0.5 | 1.3 | 0.3 | 1.0 | 0.5 | -   | 0.3 | 0.8 | 0.1 | 0.6 |
| 427 Services to Special Categories of Users    | 3.0 | 4.7 | 3.4 | 2.6 | 2.7 | 2.6 | 3.0 | 0.8 | 2.3 | 2.8 | 2.0 | 2.6 |
| 428 Cultural Activities                        | 0.5 | 0.5 | 0.5 | 2.1 | 4.0 | 2.7 | 0.6 | 2.2 | 1.1 | 1.0 | 2.5 | 1.5 |
| 429 Other Subjects                             | 3.4 | 0.7 | 2.6 | 1.7 | 1.0 | 1.4 | 0.4 | 0.6 | 0.4 | 1.3 | 0.7 | 1.1 |
| 430 Processing                                 | 0.6 | 7.6 | 2.5 | 0.5 | 2.0 | 1.0 | -   | 0.1 | -   | 0.3 | 1.8 | 0.7 |
| 431 Acquisitions                               | 0.2 | 1.1 | 0.5 | 1.1 | 4.1 | 2.0 | 1.4 | 1.5 | 1.5 | 1.1 | 2.2 | 1.5 |
| 432 Cataloguing                                | 3.3 | 1.3 | 2.7 | 2.4 | 3.2 | 2.7 | 1.1 | 2.2 | 1.5 | 1.9 | 2.4 | 2.0 |
| 433 Classification                             | -   | -   | -   | 0.9 | 0.3 | 0.7 | 1.7 | 1.7 | 1.7 | 1.2 | 1.0 | 1.1 |

**APPENDIX I (continued)**  
**The Distribution Of Danish LIS Periodical Articles By Topics, 1957-1986: Percentages**

| Topics   | 1957-1966                    |                   |       | 1967-1976       |                   |       | 1977-1986       |                   |       | 1957-1986       |                   |       |
|--|------------------------------|-------------------|-------|-----------------|-------------------|-------|-----------------|-------------------|-------|-----------------|-------------------|-------|
|  | Primary Subject              | Secondary Subject | Total | Primary Subject | Secondary Subject | Total | Primary Subject | Secondary Subject | Total | Primary Subject | Secondary Subject | Total |
|  | 434 Indexing and Abstracting | -                 | 0.4   | 0.1             | 0.9               | 1.5   | 1.1             | 0.5               | 1.5   | 0.8             | 0.5               | 1.3   |
| 450 Systems  | -                            | -                 | -     | 1.4             | 1.2               | 1.4   | 0.9             | 1.9               | 1.2   | 0.9             | 1.4               | 0.5   |
| 460 Automation of Library Processes                        | 0.2                          | 0.5               | 0.3   | 2.7             | 7.4               | 4.3   | 4.2             | 3.4               | 3.6   | 3.0             | 4.2               | 3.4   |
| 470 Materials/Collections                                  | 5.7                          | 2.2               | 4.7   | 7.6             | 5.4               | 6.9   | 7.0             | 8.0               | 7.4   | 7.0             | 6.4               | 6.8   |
| 471 Multi-media  | 0.4                          | 3.7               | 1.3   | 4.4             | 5.6               | 4.8   | 4.8             | 4.9               | 4.8   | 3.9             | 4.9               | 4.2   |
| 480 Buildings and Equipment                                | 16.4                         | 3.6               | 12.9  | 6.4             | 2.6               | 5.1   | 3.6             | 3.5               | 3.6   | 6.7             | 3.2               | 5.6   |
| 490 Cooperation. Networks and Resource Sharing             | 5.2                          | 12.1              | 7.0   | 4.9             | 4.2               | 4.7   | 2.4             | 6.1               | 3.6   | 3.6             | 6.3               | 4.5   |
| 411 Library Users  | 4.3                          | 1.0               | 3.4   | 2.8             | 2.3               | 2.6   | 2.8             | 4.9               | 3.4   | 3.0             | 3.5               | 3.2   |
| 412 Instructions in Use of Libraries and Library Materials | 0.2                          | 0.6               | 0.3   | 0.2             | -                 | 0.1   | 0.2             | 0.6               | 0.3   | 0.2             | 0.4               | 3.0   |
| <b>5 Related Fields/Tangential to Librarianship</b>        |                              |                   |       |                 |                   |       |                 |                   |       |                 |                   |       |
| 510 Publishing and Copyright                               | 1.2                          | 1.1               | 1.2   | 1.5             | 1.8               | 1.6   | 1.7             | 1.4               | 1.6   | 1.6             | 1.5               | 1.5   |



|  |       |       |      |       |       |       |       |       |       |       |        |      |
|--|-------|-------|------|-------|-------|-------|-------|-------|-------|-------|--------|------|
| 511 Published Materials                      | 0.4   | 2.0   | 0.8  | 1.7   | 1.1   | 1.5   | 2.3   | 3.6   | 2.7   | 1.8   | 2.6    | 2.0  |
| 520 Book Selling                             | 0.3   | 1.6   | 0.6  | 0.8   | 0.6   | 0.7   | 0.7   | 0.9   | 0.8   | 0.6   | 0.9    | 0.7  |
| 530 Historical Bibliography                  | 1.5   | 1.7   | 1.5  | 1.1   | 2.6   | 1.6   | 0.7   | 0.8   | 0.7   | 0.9   | 1.5    | 1.1  |
| 540 Reading                                  | -     | 0.6   | 0.2  | -     | 0.3   | 0.1   | 0.3   | 0.9   | 0.5   | 0.2   | 0.6    | 0.3  |
| 550 Public Lending Right                     | -     | 0.4   | 0.1  | 0.2   | 0.2   | 0.2   | 0.5   | 0.6   | 0.5   | 0.3   | 0.4    | 0.3  |
| 560 Bibliography and Bibliographical Control | 1.2   | -     | 0.9  | 0.7   | 1.1   | 0.8   | 0.9   | 0.8   | 0.9   | 0.9   | 0.8    | 0.9  |
| 570 Information Technology                   | -     | 1.6   | 0.4  | 0.4   | -     | 0.3   | 3.2   | 1.6   | 2.7   | 1.8   | 1.1    | 1.6  |
| <b>6 Unclassifiable</b>                      |       |       |      |       |       |       |       |       |       |       |        |      |
| 600 Unclassifiable; Miscellaneous            | 1.5   | -     | 1.1  | 5.4   | -     | 3.6   | 7.0   | -     | 4.8   | 5.6   | -      | 3.8  |
| Totals                                       | 100.3 | 100.3 | 99.9 | 100.4 | 102.6 | 100.4 | 100.6 | 100.4 | 100.2 | 100.4 | 99.8   | 99.5 |
| Total number of pages                        |       | 3,101 |      |       | 5,508 |       | 9,997 |       |       |       | 18,606 |      |

**APPENDIX II**  
**Classification Scheme (Classifying of LIS Articles)**

**1 General**

This classification is used for contributions and studies which provide a broad overview of librarianship or its foundations. Articles which deal with a specific subject are placed in categories 2 through 4.

- 110 Library History
- 120 Libraries and Society
- 130 International and Comparative Librarianship
- 131 Specific Regions and Countries (subdivided alphabetically by countries and regions, descriptions/profiles/studies of individual libraries/library systems in specific geographical areas are placed here as well)

**2 Professional Concerns**

Articles classified here deal with librarianship as a profession, including such concerns as status, salaries, and education.

- 210 Organizations (including international LIS organizations such as IFLA, UNESCO and FID, professional library associations, organisations connected with libraries (such as State Inspection of Public libraries), private organisations and library suppliers)
- 211 Unions (including union viewpoints on salaries, working conditions, collective bargaining, etc.)
- 220 Legislation
- 221 Library Policy (the Report of the Library Commission)
- 222 Free versus fee discussion in relation to LIS services
- 230 Education for Librarianship (including further education)
- 231 Continuing Education
- 240 Manpower
- 250 Status and Image (including Non-professionals)
- 260 Research
- 270 Ethics, Censorship, Intellectual Freedom

**3 Theoretical**

This classification includes articles which examine or attempt to formulate theories or principles which can provide a theoretical basis for library and information science. The application of theories from other disciplines to the LIS field is included here.

- 310 General
- 320 Information Science Theories
- 330 Documentation
- 340 Structure of Knowledge and Information (includes the use of information in different situations or disciplines; the knowledge structure of disciplines, e.g. scientific and technological information)

- 350 Organization of Knowledge and Information (includes the creation or analysis of intellectual systems for the classification or arrangement of knowledge)
- 360 Dissemination and Retrieval of Information (includes the study of information transfer and of user interactions with systems)

#### **4 Applied**

Publications dealing with information science or librarianship in practical situations are placed in this category.

- 410 Administration and Management (including planning, PR, promotion, marketing, staffing, finance)
- 420 Public Services (the direct provision of services to the public)
- 421 Reference Services (including current awareness and alerting services, online searching and community Information)
- 422 Circulation

[special services:]

- 423 Services to children and youth (children's libraries)
- 424 Music libraries
- 425 Art libraries
- 426 Hospital libraries
- 427 Services to Special Categories of Users (such as the disadvantaged, the physically isolated, immigrants, ethnic minorities, senior citizens, etc.)
- 428 Cultural activities (e.g. films)
- 429 Other special services subjects (including role in adult education and permanent education and bookmobile services)
- 430 Processing (technical services including acquisitions and cataloguing)
- 431 Acquisitions (including legal deposit)
- 432 Cataloguing
- 433 Classification
- 434 Indexing and Abstracting
- 450 Systems (the study of systems used within or among libraries)
- 460 Automation of Library Processes, Computer Use, Mechanization
- 470 Materials/Collections (includes materials selection, collection development, reference materials, subject literatures for collections, archives, local history collections, etc. and preservation and conservation)
- 471 Multi-media (incl. non-book materials, micrographics and interactive media such as on-line databases and CD-ROM)<sup>1</sup>
- 480 Buildings and Equipment (includes buildings: their physical characteristics and their furnishings as well as suppliers)

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<sup>1</sup>In the context of the present study the term "Multi-Media", although a post-1986 label, is used mainly as designation for audio-visual materials in their widest sense.

## **52 Kajberg**

- 490 Cooperation, Networks, Resource Sharing (all types of cooperative agreements and arrangements between libraries including interloans)
- 411 Library Users (including the behaviour, attitudes, and opinions of library users and/or non-users; user studies are placed here)
- 412 Instructions in use of Libraries and Library Materials; User Education

## **5 Related Fields/Tangential to Librarianship**

This class includes any articles not directly on libraries, librarianship, or information science.

- 510 Publishing (concerned with production including authors and copyright)
- 511 Published Materials (such as children's literature)
- 520 Book Selling (concerned with marketing)
- 530 Historical Bibliography, History of Books and Printing (including book illustration, the study of manuscripts, incunabula, etc.)
- 540 Reading
- 550 Public Lending Right (author support schemes)
- 560 Bibliography, Bibliographical Control, Bibliographies
- 570 Information Technology (e.g. computers, telecommunication, videotex, electronic mail)

## **6 Unclassifiable (LIS specific but not fitting into above classes). Miscellaneous**

### **Type of Library**

- Academic and Research (including national libraries)
- Public
- School
- Special
- Multi-type
- Non-library Setting
- Not Applicable