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THE COMPLETE CARIBBEANA 1900-1975:
A BIBLIOGRAPHIC GUIDE TO
THE SCHOLARLY LITERATURE

By Lambros Comitas
Professor of Anthropology and Education
Teacher's College, Columbia University

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A Brief Golden Age?

As our colleagues in Britain observe the centennial of The Library Association, College & Research Libraries sends its greetings to them with this issue, which features several articles on librarianship in that nation.

In the opening contribution, Norman Roberts, University of Sheffield, provides a broad overview of British university librarianship over the past 100 years. A. G. Myatt, British Library Lending Division, follows with an account of the educational and publications programs of the Lending Division. His article provides a new view of the work at Boston Spa, an institution many of us think of solely as an enormous warehouse that sends out books, journals, and photocopies to all parts of the world.

With the cooperation of numerous academic librarians, we have been able to present "A Gathering of British Libraries," in which through a series of photographs we depict several of the more recent university library buildings in England, Scotland, and Wales.

Although his tale is told on a different scale from that of the United States, the account by Norman Roberts is a familiar one to American academic librarians: genteel poverty until the 1960s when rising student populations and greater public and private funding led to a "brief golden age." This was to be abruptly changed in the following decade when with inflationary forces and greatly reduced financial support the expansionist enthusiasm of the 1960s was replaced by a philosophy of no-growth.

In discussing this problem, Roberts records the opportunities librarians missed: "University librarians had failed either to establish, or to convey to the world at large, the nature of the relationship between quality of scholarship, research education, and the quality of library collections and services." And while we consider British librarianship, we realize this criticism applies to our nation as well. We too may question whether our golden age is past.

R.D.J.
Aspects of British University Librarianship, 1877–1977

This review of developments in British university libraries is divided into three major periods, 1877–1919, 1920–1945, and 1946–1977. Major subjects covered include library services, staffing, management attitudes, buildings, and automation. The role of the University Grants Committee in library development is stressed, and present economic difficulties and problems arising from the recent Atkinson Report are discussed.

The British Library Association was founded in 1877. The intervening century of its existence has been devoted to intensifying and broadening the professionalization of librarianship. For the first fifty years of the century, university librarians and their staffs remained apart from this movement. This disinterest was of little moment. Universities were few in number and small in size, their libraries inconsiderable, and university librarians with what might be taken to be professional aspirations rare.

It was not until 1928 that university librarians and their interests were brought formally within the professional fold with the establishment of the University and Research Section of the Library Association. Two years later the section had recruited a total membership of 85. The slow but steady growth in membership during the interwar years was a prelude to the substantial increases of the postwar period. The section had 428 members in 1946; 1,100 in 1950; 1,850 in 1960; 3,388 in 1970; and 3,989 in 1976.¹

The magnitude of these figures reflects something of the educational revolution (in British terms!) that overtook the university sector during the postwar years. In reacting to social, political, educational, and economic factors of national significance during this modern period, universities developed their libraries to unprecedented levels of provision and services. We now know that these factors are not always expansive in their effects but that, either way, they cannot be ignored. It is enforced responsiveness to the restrictive aspects of these forces that is compelling university librarians currently to adopt more limited aims and aspirations.

To describe in detail the development of university libraries to this latest point would be to engage in a lengthy, involved, and particularist story. Both space and interest dictate a simplification and a high level of generalization. To this end, the history of a century is condensed into three periods: 1877–1919, 1920–1945, and 1946 to date.

The simplifications associated with this procedure may be misleading because they hint at a greater degree of system and planning than should ever be at-
tributed to the British approach to higher education. Much of what is said may be applied to Scottish libraries, but the generalizations are based, in the main, on university libraries in England and Wales. This qualification is necessary because higher education has been managed more sensibly in Scotland.

For an American audience it may be necessary to point out that this review excludes the treatment of polytechnics, colleges of education, and institutes of higher education, which also contribute to tertiary education. The history of each institution is so different from the others and from universities that no single piece of any point and substance could be written about the group.

1877–1919

By the turn of the nineteenth century the monopoly of university education held by Oxford and Cambridge had been breached. The University of London had been established in 1836; the ecclesiastical foundation of the University of Durham had received its charter in 1837 to be followed by a clutch of colleges that became known as civic universities. These colleges, unlike Oxford and Cambridge, had their origins in institutions that emphasized scientific, technical, and medical instruction.

Their establishment and subsequent elevation to university status owed everything to civic pride and local initiative and nothing to the idea of a national system of higher education planned by the central government. The results were distinct and individual universities and, as a consequence, distinct and individual libraries.

The optimism that brought the civic universities into being proved insufficient to maintain them in a state of solvency. In 1889, following a precedent established to favor the Welsh colleges, central treasury funds were distributed for their support. The initial sums were small, but the decision was of enormous importance. The practice of providing central government funds to maintain and develop the university sector was continued and expanded and, in 1919, formalized through the establishment of the University Grants Committee (UGC).

The work of this curiously British body enabled British universities to meet the challenges of the twentieth century with increasing state support while resisting, with a remarkable degree of success for most of the period, encroachments by the state upon their autonomy. The task of the UGC was seen as combining “the proper autonomies of the universities with the proper attention to effective use of scarce national resources.” In performing these tasks the UGC came to exert such a dominant influence upon university libraries that their histories cannot usefully be separated.

However, this is to get ahead of the narrative. During this period central government support grants were occasional and small. Generally, universities, old and new, relied upon their own resources. In most instances, as a result, libraries fared badly. Universities were at first slow to realize either the necessity for a library or its necessary size and scope; most of them passed through the stages of a cupboard, a room which also served for other purposes, a room devoted to the library, and a series of rooms adapted with greater or less success.

In 1918 probably only two of them—Manchester and University College, London—could be said to be “adequate to the functions of a university library.” University libraries were characterized by small, indifferent collections organized on the closed-access principle. The post of librarian was rarely full-time; the few full-time staff in the post were untrained. Accommodation for books, readers, and staff was usually inadequate and budgets trifling.
The universities of the period were small: by 1913–14 the full-time university population numbered only 20,547. This factor, coupled with the generally straitened financial circumstances and prevailing educational attitudes, did not generate an environment conducive to the development of libraries. Neither did it encourage the progress of professional librarianship.

1920–1945

The end of World War I found British universities much debilitated. The University Grants Committee was established (1919) to assist in their recovery and to help universities meet the pent-up demand for university education. In 1920–21 the university full-time population was 36,709. At the outbreak of World War II, the academic year 1938–39, it had increased to 50,246. The increase was accommodated in expanded universities and by the establishment of new university colleges (Leicester in 1918, Hull in 1928).

To understand the development of university libraries during this period it must be remembered that, even by 1938–39, only three English universities topped 5,000 full-time students (London, Oxford, and Cambridge). Only one other, Manchester, exceeded 2,000. At the lower end of the scale the universities of Sheffield and Southampton mustered 767 and 268 full-time students respectively. The library staffs of British universities totaled 106 in 1920–21 and around 150 by the end of the period.

It was not surprising that the newly constituted University Grants Committee, which held that “the character and efficiency of a university may be gauged by its treatment of its central organ—the library,” found much to complain about and castigate in the state of university libraries in the decade following the end of World War I. In 1921 the committee regretted to “find that a number of authorities are not yet in a position to make adequate provision whether for buying books or for paying the library staff.”

The absence of the basic necessities was again stressed in 1923: “With few exceptions, and we understand that even the great libraries of Oxford and Cambridge were not among them, the libraries of our Universities and Colleges are suffering a process of starvation, and large additional sums of money will have to be spent upon them before they could be regarded as maintained on a scale commensurate with their real needs.”

The adequate funding of libraries remained a cause for concern throughout the 1920s. In 1927 the UGC, trying to influence the priorities of universities and government alike, pointed out that university libraries presented an “essentially gloomy picture.” In their report of that year it was asserted that “the total figure for all our grant-aided universities and colleges put together appeared to be little larger than the combined figure for the two universities of Harvard and Yale.”

As late as 1930 the UGC was still calling universities to task for neglecting their libraries: “We can still wish it were more common to find a clear conception of the aims and ideals of a University guiding and informing the practice of governing bodies.... Many university institutions have still to give evidence of being conscious that their quality and standing as instruments for the advance of learning may to a great extent be gauged by their libraries and the policy pursued for the maintenance and development of them.” Despite a decade of endeavor following the end of the war, the views of the UGC regarding the role of the library in university education were far from being implemented.

By the middle of the 1930s, however, there were signs that these repeated
goadings were having some effect. Staffing levels were improving, book funds were increased, and new libraries were provided to replace inadequate make-shifts and to cater for expansion. For example, Cambridge opened its new library in 1934, Southampton in 1935, Leeds in 1936, Swansea in 1937, Exeter in 1939.

As universities grew, their libraries came to appreciate the need for organized forms of cooperation to improve the availability of materials unavailable locally. In 1925 university librarians established their own scheme of interlibrary lending that, in 1931, was merged into the national system of interlending. The growing realization of interdependence resulted in the compilation and publication of the *Union Catalogue of Periodical Publications in University and College Libraries* in 1937.

During these years, university librarianship was establishing its professional credentials. The ideals of the time were clearly expressed in one of the few general texts on university libraries and librarianship by British authors. This work, Woledge and Page’s *Manual of University and College Library Practice*, unknowingly was to be a memorial to the past, to forms of librarianship and associated educational attitudes that were to be transformed by social forces of unexpected power unleashed by World War II. This manual makes it clear, as has been noted, that university libraries had progressed during the previous decade but that much remained to be done.

For example, even in 1940, “there are only a few universities in the British Isles where the membership of the Senate includes the librarian. . . . The real truth is that the universities have never quite made up their minds what the constitutional position of the librarian should be. Is he purely an academic person? Is he a member of the administrative staff? In the confusion the librarians may fail to secure the dignity and privilege that belong to the one or the other.”

Privilege and dignity are not words that come easily to the lips of professional librarians these days, but the problem outlined was of the utmost importance to the librarians of the time. It emerges from Woledge and Page that librarians had succeeded only partially in convincing the academic establishment of the essential role of libraries and librarianship in the attainment of the educational goals of universities.

As far back as 1921, the UGC had expressed the view that the librarian should be “an officer of professional status and emoluments, and an ex-officio member of the Senate, with the right of attending meetings of all faculties.” Despite such support, only five universities had accorded professional status to their librarians by 1940 and only in half of our universities “does one find that the librarian is a member of the Library Committee with the power to vote.”

What professional attitudes characterized this period? The overwhelming importance of collection building, with the emphasis firmly and positively on the needs of research, was an unchallenged article of faith. “It is not by the grandeur nor even by the beauty of its buildings and their furnishings that a university library will attract its readers, but solely by the richness of the collection within its walls,” and “it is not the practice in this country, nor is it advisable, to buy duplicate or multiple copies of books much in demand.” “It may, however, safely be asserted that it is the aim of most university librarians to devote the minimum of expenditure to purchases which are only of interest to undergraduates in preparing for examinations, and to apply the great bulk of available funds to the acquisition of
books and periodicals of a kind which assist research in as many fields as possible." The unknown future was to make a nonsense of such a view, but at what cost in terms of research and scholarship we may yet have to discover.

During this period the principle of direct access to as large a proportion of the stock as was practical became generally accepted. This end was accomplished through a variety of systems reflecting the diverse origins and histories of the universities and their libraries. Classification and cataloging practices differed widely. In Woledge and Page the "guard book" form of catalog was advocated, yet another example of the traditional influence of great institutions—in this case the British Museum Library. The author catalog was regarded as essential, but "the subject catalogue is less necessary; competent teachers and research workers know their subject and have access to their own bibliographies"—a view held by many university librarians long after the circumstances that give it a degree of validity had vanished.

The libraries of the period were functionally organized and run, in the main, by staff without professional training other than that gained on the job. Their librarians strove for centralized control to bring order out of the chaos of departmental and sectional collections. Few services were offered beyond the lending of material and the provision of reference collections. The more progressive librarians were devoting some thought but, perhaps, rather less effort to instruction in the use of libraries.

Currently it is fashionable to criticize university librarians for their commitment to collection building and, by implication, their preoccupation with size. Such criticisms frequently ignore the research context within which university librarians placed their libraries and the fact that librarians were reflecting, as they were expected to do, a scale of priorities established by the universities. On this issue the Manual is unequivocal: "Nor are mere numbers of volumes of any greater significance in a university library than in one of any other sort. Not how many, but what books are in the library is the vital consideration. . . . It is well always to remember that there is a world of difference between the functions of the library of a modern university and a national library, and that the university library has no justification for its existence save in so far as it aids the work of the university." The Manual describes the middle ages of British university librarianship—the nonscientific era. Nothing makes this clearer than the statement that in "no English university has any attempt been made to assess the real needs of the library in terms of pounds, shillings and pence, on the basis of a systematic examination of its existing book collections and their deficiencies." Embedded in the context of this particular text the view has a curiously modern ring to it. The succeeding phase of librarianship differed in many ways from that described in the Manual but in no way more than in the attempts to place librarianship on a systematic, scientific footing.

1946–1977

In 1938–39, 50,246 full-time students attended British universities. Postwar demand for higher education had raised the total to more than 85,000 by 1950–51. Misreading the signs while still influenced by prewar educational and social attitudes, the UGC came to the conclusion that the demand for university education would level off. This seemed desirable because this body was also of the opinion, fairly generally held, that "no further substantial increase in student numbers could be expected in the immediate future without
reducing university standards." This view, so seriously propounded, was soon pushed aside as an irrelevance by egalitarian political and social forces and by insistent demographic pressures.

The 1950s simply reinforced what should have been perceived sooner by the representatives of the university system. The educational expectations of the British people had been transformed. An increasing proportion of the seventeen- to eighteen-year-old age group was staying longer at school and qualifying for university admission (this phenomenon came to be called "the trend"). In addition, during the 1960s, the universities were required to cope with the educational consequences of the "bulge," i.e., the increased postwar birthrate.

By all previous British standards the effect upon the university population was remarkable. During the decade 1950–51 to 1960–61, the full-time numbers enrolled at British universities rose to 107,699; by 1977–78 the numbers are expected to be around 281,000. More than a five-fold increase over the 1938–39 figure, it remains a lower proportion of the comparable age groups attending universities than in the United States and most European countries. Of course, as a consequence, "wastage rates" are also considerably lower. Changes of this magnitude inevitably influence libraries. In retrospect, it is possible to see that the change in scale associated with more generous funding than hitherto brought to university libraries a brief golden age. This period barely lasted out the 1960s.

That university librarianship was moving into a period of change was evident by the growing expression of professional cohesion, the recognition that learned libraries had a common cause to further but no suitable agency or association to focus interest and advocacy.

Interestingly, university librarians did not feel that the Library Association offered a natural home for their proposed activities. In September 1950 the Standing Conference of National and University Libraries (SCONUL) was established, which would "firstly . . . provide opportunities for the discussion of matters of particular concern to large learned libraries by those responsible for their administration, rather as does the Association of Research Libraries in the USA. Secondly . . . could represent their views to outside bodies more accurately and with more weight than the Library Association can at present."  

Initially, SCONUL confined its membership to the larger libraries, but the size qualification was relaxed over the years. Now close to seventy institutions are in membership meetings twice a year to discuss technical and policy issues. The activities of SCONUL are varied. Much of its work is carried out through subcommittees; for example, there are subcommittees on cooperation in acquisitions, export of printed books and manuscripts, training for librarianship, new media, information services, etc. A number of influential conferences and "exchange of experience" seminars also have been organized. On occasions, when a general university library viewpoint has to be expressed, librarians look to SCONUL to take the lead.

Although university librarians may have perceived the need for a collective professional approach to library problems, the immediate postwar development was slow. As ever, the UGC recognized that there was a need to improve library funding. The committee noted that between 1938–39 and 1951–52, book funds had increased from £87,802 to £321,269. This seemed substantial enough in the context of past experience but insufficient to meet the prevailing, quite exceptional, circumstances of expansion. In their own words, "there are few, if any, universi-
ties and colleges which are not suffering from a shortage of the books which are requisite for undergraduate reading." This emphasis on undergraduate reading was only a preliminary indication of what was to become a major shift in interest.

Nonetheless, the committee understood, perhaps better than the librarians of the time, what the generally canvassed solution to the problem would bring in its train.

There is room for great expansion and improvement, and it is a matter of regret that owing to the many pressing claims on the resources at our disposal so little has been possible to meet the almost universal need for better library accommodation. But whatever improvements in this respect the future may hold in store, there seems to be little prospect that it will ever be possible wholly to relieve the pressure on libraries by means of expansion, and in these circumstances it will probably always be necessary for libraries to be highly selective both in what they buy and in what they keep. We sometimes wonder whether, in dealing with books of the kinds needed mainly by undergraduates, the possibilities of "weeding" are sufficiently exploited.

Expansion, then, was not limitless. It was not a doctrine to find favor with contemporary librarians intent upon making up for past deficiencies. No attempt was made to discover, even with such a hint from UGC, at what distance from their current positions lay the possible and desirable limits of expansion. It was an ignorance without penalties in times of relative plenty, but it left librarians vulnerable in a world of educational priorities adjusted to unprecedented economic harshness.

At last the message of change got through. The UGC recognized that "the major change which has come over the university scene since 1953 is the increased pressure on the universities to admit higher numbers of students."

The influential Robbins Report reinforced the trend and secured its educational acceptance by insisting that opportunities should be provided for those who desired higher education.

The eventual result was the enlargement of existing universities, the establishment of new universities, and the elevation of colleges of advanced technology to university status. (New universities were established at Sussex, York, East Anglia, Essex, Kent, Warwick, and Lancaster, following on the earlier Keele.) Such developments were associated with the initiation of large capital works for libraries. The consequent planning exercises brought the realization that little enough was known about the physical relationships between the functions of libraries and their architectural expressions.

From this recognition of professional ignorance, made in 1958, and the subsequent steps taken to remedy the situation may be dated the beginnings of a new, inquiring type of university librarianship that was to examine critically, and sometimes unsympathetically, the traditional practices and beliefs of university librarianship. The role of the UGC in pushing librarians along this path cannot be overrated.

In 1964 this committee pointed out that there was a "very great need for fundamental rethinking by the universities of their library policies." As part of their own effort to understand the nature of the library problem the committee formulated a number of seemingly obvious questions. One of these represented a recurring theme in UGC thinking and one that seemed to worry the distributors of central government funds more than it did librarians. It was: "Could any university reasonably expect now to be able to maintain a library or libraries to cover all the needs of its staff and students, particularly in the fields of research?"
The answers provided by university librarians to such questions seemed less than convincing. The UGC determined on an attempt to find its own answers. This it did by setting up a committee of inquiry, the Committee of Library Problems in Institutions of Higher Education. In 1967 this body produced the Parry Report, so called after the chairman, Sir Thomas Parry, Principal of the University College of Wales.

This report ranged widely and critically over such topics as cooperation, interlibrary loans, the acquisition of library materials, accommodation, services, techniques, administration, staffing, finance, and collections. Much of what was discussed and recommended should have come as no surprise to a professional librarian. That such obviousness needed repeating in the context of university librarianship was as significant a commentary on the state of university librarianship as the recommendations.

The report was a rather unforceful charter for the more generous treatment of libraries by universities. Like almost everyone else at this time with a public platform available, the Parry Committee emphasized the need to discover more about the use of university libraries and recommended the establishment of a permanent Libraries Sub-Committee of the UGC “in order to stimulate a continuing interest in the study of library problems.” This recommendation was ignored. It was noteworthy that the Parry Committee attempted (perhaps not too successfully) to practice what it preached. It was the first report to make use of special data-gathering exercises.

Perhaps the most important contribution of the Parry Committee lay in its exposure of inadequate library funding. It was discovered that, on average, libraries were allocated 3.8 percent of current university expenditure. The figure needed increasing to 6 percent of total expenditure. Earlier librarians had asserted library expenditure cannot be fixed as a definite proportion of the total expenditure of the university, for this will be affected by factors which have no influence on the demand for library facilities and will not be affected by some factors which have such influence. The force of this view had not diminished. But experience had demonstrated, all too conclusively, that there was little likelihood of establishing an appropriate library standard derived from internal, individually negotiated, criteria. Despite obvious criticisms there was a value in being present with a comparatively generous target figure. This is what the Parry 6 percent proved to be. A measure of the general acceptance of this formula is to be found in the numerous library annual reports relating their institutional expenditures to the Parry formula.

Although the Parry Report had little direct impact, the following years of the 1960s were good years for university librarianship. All the indicators moved favorably. Staff establishments expanded handsomely, book budgets and collections grew at a considerably faster rate than hitherto, and new and extended library buildings verged on the commonplace. Library use became more intensive, and new service attitudes appeared. The basic drive was provided by the growing university population and by the general acceptance, despite UGC wariness, of the view that if a demand for books and periodicals existed then libraries should be built, staffed, and maintained to meet such demand. The interests of the undergraduate were assuming a dominant position.

(For an American audience, references to growth must be given a perspective! Currently five British universities are around the 10,000-or-above mark: Cambridge, Oxford, London, Manchester, and Leeds. The middle-sized universities range from 6,000 to
8,000. Smaller universities may have as few as 2,500 students.)

Before proceeding with the chronological story, it may be useful to review briefly some of the achievements of the 1960s and early 1970s.

SERVICES

As British universities came to lay greater emphasis upon their teaching functions, so did their libraries mirror the change by widening the variety of services that they offered and by intensifying and improving certain services and facilities. The user orientation of the transformed colleges of advanced technology probably helped to alter the practices and attitudes of university libraries.

With the needs of undergraduates more firmly in mind, it became increasingly apparent that the traditional forms of initiation to libraries and facilities and to the systematic use of subject literatures were wanting in terms of intent, execution, and effect. As a consequence, and probably years later than was required, university librarians came to devote far more ingenuity and resources to the problems associated with library induction and use.

By today it may be asserted that all forms of modern aids devised by librarians have been deployed to combat ignorance of, and apathy toward, library potential. To what effect it has worked may be a moot point. However well executed, such exercises relate to techniques and circumstances contextually divorced from the academic interests, pressures, and rewards that provide the most important educational variable of all: motivation.

Librarians have long appreciated the weakness of their externality relative to students. A possible solution lies in including library/literature skills as integral components of first-degree courses. Librarians have continued to make such proposals despite the noted reluctance of British academics to allow time for anything other than their own subjects or their own courses. Persistent advocacy, growing literature problems, and a general acceptance of the university librarians' professionalism seem now to be having an effect, however. For example, at Sheffield University, proposals for introducing bibliographical skills as a formal requirement for the first-degree sociology program are now being considered. Certain masters' programs already have this requirement.

Such developments are not novel, but they do recognize that the university library is a teaching instrument which has to be used positively and actively for greatest benefit. British universities are only on the threshold of such developments.

Another aspect of positive librarianship was represented in 1969 by the experimental introduction of information officers, specifically so called, into university libraries. Such personnel came to be regarded as specialists providing "personal help, extensive if required, with reference queries of all kinds; retrospective searches, whether manual or computer aided; current awareness, whether manual or computer aided; translation services." 31

None of these responsibilities were new to university libraries, but the systematic, special-library, personalized approach was. Significantly, a number of information officers came to be associated with computerized information services. In the experiments that preceded the appointment of such specialists, 32 there were indications that imaginative and intensive deployment of information-oriented personnel could influence the information habits and receptivity of client groups. Such developments achieved a degree of impact.

For example, a committee considering the library resources of the University of London concluded that a central information service "to be staffed by ex-
experienced Information Officers and to have access to all computerized sources of information as well as the more traditional ones, and to the necessary computers" was needed.33

Practical results have not completely lived up to the initial promise. And for good reasons. Fully effective information services demand high professional staffing ratios. The financial support for such provision was not forthcoming. As a result, in many universities the ratio of information officers to population served was absurdly low. The close personal links and the extramural relations, which are the essence of creative information work, were established in only a very small fraction of the potential market. For the present it must be accepted that the benefits of the information officer concept have yet to be fully realized.

Heavier demands upon their materials persuaded many libraries to adopt short-loan collections34 and variable loan policies35 to quicken stock turnover and improve its availability. Increasingly, computerized circulation systems assisted by providing quicker and more accurate location data. Computerized systems also enabled a number of university libraries to embark on programs of personal assistance, in the form of literature searches and current awareness services, of a depth not previously attempted. The comparative high costs of such services dampened enthusiasm in some quarters. There seems little doubt that computerized services have established themselves and now await only better financial circumstances for more general use.

The proliferating varieties of "new media" during this period also influenced library attitudes. The proponents of the new materials argued their case on the unity of communication, that physical form should not be the main criterion governing the legitimacy of communication devices for library storage and use. The arguments were persuasive and logical, but, nonetheless, university librarians moved to embrace the nonconventional forms with less than whole-hearted enthusiasm.

But the University Grants Committee was already convinced that university libraries should take in the new media and recommended "that library budgets might require to be reconsidered in the light of the provision of non-book materials.36 This was not the most positive of statements, perhaps, but enough to indicate that the restriction of university library services to the traditional materials may be too limiting. Much of the force of the "new media" argument is derived from the educational purposiveness of libraries.

As one of the more persuasive proponents expressed it, "the new media may provide the opportunity for libraries of all kinds to demonstrate their major contribution to education which has all too frequently been overlooked and to abandon the subordinate position in education which they have often been obliged to occupy.37

STAFFING

By the 1960s it was uncommon for university librarians not to be of professorial standing and members of the senate, the academic ruling body of the university. It was normal for the librarian, or a representative, to have a place on the various faculty boards to ensure (at least in theory) the close correlation of educational developments and library provision. As this period progressed, so did the insistence upon formally acquired professional qualifications grow. This change in attitude was exemplified in the unlikeliest of institutions. For example, a committee convened to consider the library resources of Cambridge University insisted on "effective training in librarianship" for graduate and nongraduate library assistants alike.38
The organization of staff and their responsibilities was hierarchic and functional. The typical chain of chief librarian, deputy, sublibrarians, assistant librarians, senior library assistants, and library assistants tended to be managed on the principle of benign paternalism. The rigidities of the functional form of organization were modified to some extent by the adoption of subject specialization. The organization of staff in many university libraries came to approximate this pattern. “Approximate” is a very necessary qualifier in this context. The range of duties and responsibilities undertaken by subject specialists varied in the extreme. Although this form of organization was widely accepted, criticism from the staff viewpoint was not absent; neither was criticism on the ground of operational inefficiency.

Subject specialization represented an attempt to make work more varied and interesting, with benefits both for staff and users. The essence of subject specialization was to be found in the opportunities that it created, to a far greater degree than was possible in a functionally organized library, for professional librarians to establish close working relations with their clientele. This thrust toward greater personal service was carried further by the information officer movement. With few exceptions, however, concepts of personal service remain comparatively undeveloped in British university libraries. An overwhelming proportion of professional effort is devoted to intermediate, technical activities away from the areas of service. This fact may explain why numerous professionals complain of underutilized skills.

The expansive phase of university librarianship was associated with improved staffing establishments. From the staff point of view, continuing expansion meant the possibility of promotion and professional development through internal and external mobility. As a consequence, few university libraries introduced, or even needed, organized programs of staff development other than forms of specific in-service training. Staff development was a matter of individual initiative in circumstances that favored its exercise.

Circumstances of recent years have changed. The restrictions of the 1970s have stopped the growth of university libraries. The result is considerably less staff movement, or mobility. There are fewer external promotion opportunities, fewer internal. It follows that librarians will have to depend, to a far greater degree than previously, upon their present libraries for continuing job satisfaction and professional development. This means, in turn, the adoption of participative forms of management and systematic schemes of staff development.

The full acceptance of this view and its implications will mark an important point in university librarianship—the belated recognition that the traditional forms of university library management were sustained by special circumstances that allowed professional satisfaction and development largely to be ignored without serious organizational penalties. Unchanging staff establishments combined with unsatisfied expectations will produce staff and management frictions of a kind not previously experienced.

**Management Attitudes**

Arguably, the most significant development during this period, because of its pervasiveness, was the displacement of the scholar-librarian ideal by that of the manager-librarian. The dichotomy may not be as clear as is sometimes represented, but, nonetheless, the labels represent a real shift in interest. The emphasis of librarians has moved from collection building and conservation to the active exploitation...
and manipulation of resources for the majority of users. Optimum use of materials, services, and personnel requires, for its achievement, decisions based on rigorous and systematic data collection and continuous organizational self-analysis. Hunch and intuition still may have a place in university library management, but they live uncomfortably in a world given over to operational effectiveness and cost-efficiency.

Examples of routine and specially funded forms of research to gather what may broadly be termed management information are too numerous to list. However, an arbitrary selection will reveal the distance traveled by librarianship from the 1940s. The user now dominates. Numerous special surveys have been undertaken to uncover the characteristics and habits of this familiar, if little understood, creature. 45

The age of certainty has faded. This was nowhere better illustrated than in the PEBUL project, which asked the once needless question: “What is the value of a library to a university?” 46 External circumstances were shaping library preoccupations. Attempts were initiated to establish “criteria for selection for acquisition and discarding of monographs” 47 and to investigate problems associated with the relegation of less used holdings. 48 The wider management view of libraries as systems was reflected in research activity at Lancaster University. 49 In many ways the activities of this latter university seem to typify the new approach to library management.

A sustained interest in academic library management characterized the Cambridge Library Management Unit established in 1969. The unit (now at Loughborough University) carried out large-scale investigations into management and administration, developing, for these purposes, a range of techniques that have been used by many librarians throughout the world. The work of this unit was distinctive in that it placed emphasis upon the development of techniques that could be applied by library staffs themselves.

The Library Management Unit and much of the research undertaken by universities into management, computerization, information officers, stock management, etc., are financed by the British Library Research and Development Department (BLRDD). 50 While the work of central government agencies is rarely free from criticism, it cannot be denied that this department has gained credit for the imaginative way in which it has distributed its awards and encouraged research in the university sector.

SCONUL, although it commands few resources, has also contributed to what is, in effect, a managerial revolution by providing a forum (formal and informal) for the discussion and transfer of ideas.

Another aspect of management responsiveness to changing circumstances may be found in a greater enthusiasm to undertake the responsibilities of cooperation both with other university libraries and with libraries of different types.

For example, the Sheffield Libraries Coordinating Committee brings together the public, polytechnic, and university libraries of the area. 51 The South West Academic Libraries Cooperative Automation Project has brought together the university libraries of Bristol, Exeter, and Cardiff in a project that has produced a shared on-line circulation system and that is now developing shared cataloging facilities. The Birmingham Libraries Cooperative Mechanisation Project was pioneered jointly by public, polytechnic, and university libraries of the area. The exclusivity of British university libraries is not what it once was. 52

BUILDINGS

As late as 1957 “there seemed reason
to express considerable doubts about the adequacy of British university library buildings." 53 Most of the buildings were more than thirty years old. The establishment of new, and the expansion of existing, universities ushered in a period of widespread library building and an intensive interest in library planning.

This latter aspect was exemplified by the influential course on academic library planning held at York University in 1966 and organized by the Buildings Sub-Committee of SCONUL. This particular course also made evident the strong influence the United States has exerted (with suitable time lags) on librarianship in Britain. The main contributors at York were "two internationally famed academic library consultants," K. D. Metcalf and R. E. Ellsworth. 54

The first of the postwar libraries was opened at Sheffield University in 1959. The library was planned not to be found wanting, as were so many libraries of the past, in storage capacity. It was unusual to find library planners taking such a determined view of the future, but the resultant building proved inflexible in the face of the new demands of the 1960s.

Greater experience of rapid change and the acceptance of open and modular planning ensured later buildings of improved flexibility and architectural distinction. In the view of one severe critic, "Of all the buildings of the last twenty years, excluding Sheffield which effectively represented a passing era, the only complete disaster seems to have been Exeter." 55 Of the most recent construction, the libraries of the universities of Nottingham (1973) and Leicester (1974) have achieved, within quite different physical and financial constraints, professional (architectural and library) acclaim.

Even in their physical construction, libraries were reflecting the fundamental nature of the educational changes which were occurring. An aspect of the University of Sussex Library was described in the following way: "This arrangement recognizes the priorities—it is a reader's library rather than a librarian's library." Such a statement may be thought unexceptional, but it continued: "Work rooms and store rooms are reduced to bare essentials—it is the students who count." 56 The importance of the undergraduate to the university had become, by this time, an article of faith for librarians.

**Automation**

Southampton University Library "developed the first computerised circulation system (off-line) in this country." 57 The year was 1966. Many university libraries have followed this lead and employed the computer to assist in a variety of housekeeping tasks, such as circulation, periodicals control, cataloging, acquisitions, indexing, etc., and for providing computer-based services, such as literature searching, current awareness, etc.

In this latter respect the experience of the University of London, which concluded a recent conference with the view that "there is a need for computer information services" and that "on-line services will form the central core of information service in the University," is probably indicative of the forthcoming trend. 58 Application has been of a somewhat piecemeal nature, but it is now evident that the computer in academic libraries has passed through the experimental phase. It has established a place in the array of tools employed by librarians in their continuing search for greater efficiency and effectiveness. Most of the developments, many financed by the BLRDD, are recorded and reviewed in an excellent periodical publication entitled *Vine*. 59

During the late 1960s the staffs of university libraries were acquiring and improving their computer expertise.
These skills, together with subsequent technological progress, have brought university libraries closer to the threshold of integrated computerized systems. The obstacle to further advance is not lack of skill or technical capability; it is simply cost.

**Conclusions**

By the early 1970s the annual reports of university librarians were making repeated references to the adverse effects of inflation. As early as September 1970, SCONUL was predicting "a serious breakdown in the work and services of many university libraries unless their needs are more adequately safeguarded." Nothing as dramatic as a breakdown has yet occurred despite severe financial cuts imposed by the central government during the session 1974–75 and an inflation rate of a level and persistence scarcely contemplated in 1970.

But, breakdown or no, it was clear that university librarianship of the 1970s was a quite different game. The era of expansion and matching budgets and library philosophies to suit had gone. It was replaced by a period of no-growth and of rigorous financial constraints. The signs of the times were to be seen in frantic exercises undertaken to reduce, substantially, the number of periodical subscriptions; the growing reliance on interlending for the satisfaction of local demand; the freezing of posts; the smaller proportion of foreign and specialist material acquired; and in conferences and institutional policies devoted to the business of extracting more from less.

Problems were not confined to current expenditure. Capital expenditure presented even more difficulties for the central agencies concerned with the distribution of resources. "At the end of 1974 the University Grants Committee had come to the conclusion that they were not going to have enough resources, either in the short term or the long term, to build new libraries at all universities on the scale needed to match an indefinitely growing number of books. Even if this had been possible it was doubtful whether it would have been the most sensible course to follow." 63

The scale of the problem was all too evident: "So far as resources are concerned the moratorium imposed in the autumn of 1973 on UGC capital projects combined with reductions subsequently announced meant that the revised allocation of £11.5m (at 1973) for all purposes for 1974–75 had to be matched against £52.8m of outstanding projects." As we have noted, this concern of the UGC with the problem of the growth of libraries was not new. This time there was no doubt that librarians were to share fully in their concern. The result was the setting up of a working party headed by Professor Richard Atkinson, with terms of reference so tightly drawn that the conclusions and recommendations were almost foregone.

The main recommendation was that "the assessment of future university library building requirements on site should be based on the concept of a self-renewing library, that is, a library of limited size in which beyond a certain point material should be reduced at a rate approaching the rate of acquisition." These libraries should be supported by local stores with a capacity for roughly five years intake, and, as these stores filled up, the less used stock should be transferred to the British Library Lending Division. The water tank analogy may be appropriate here. As water is poured into the top tank (university library) a tap is regulated at the bottom of the tank to allow water out at the same rate of inflow. The outflow is poured into another tank (local store), which also has a controlled outflow into yet another tank (BLLD)."
Not much thought was given to the capacity and other problems of this latter tank. The publication of the report was clumsily handled. It took some time for the academic world to realize that the UGC had, almost casually, undermined the main assumptions of British academic librarianship. The main grounds of criticism seem to be (1) the unresearched and subjective nature of the report; (2) the willful disregard of the problems of humanistic research; (3) the naive and misleading cost comparisons; (4) the assumption that British university libraries were operating at, or near, an optimum size level that made stabilization desirable; (5) qualitative aspects completely ignored; (6) centralization of decisions regarding the acquisition of substantial research collections; and (7) in making its recommendations, the UGC was taking educational decisions to which the universities, in the persons of their teaching staffs, were not party.

Argumentsfavoringthe proposals tended to stress the need to face up to economic realities and to acknowledge the primary teaching functions of universities. As has been noted, university librarians were not unaware of economic realities or the shifting emphasis toward teaching. University libraries were responding to such pressures. Unfortunately, university librarians had failed either to establish, or to convey to the world at large, the nature of the relationship between quality of scholarship, research, and education and the quality of library collections and services. The lack of both qualitative and quantitative expressions of these relationships left them and their libraries peculiarly vulnerable to the financial onslaught of economically minded administrators.

For a variety of reasons this vulnerability was not previously tested during the 1960s. The political and educational attitudes of the 1970s have ensured that this vulnerability will be exploited to the fullest. It is to be hoped that university librarians will develop a philosophy of librarianship capable of adapting to difficult new circumstances and capable of restraining the extreme forms of administrative philistinism that emerge during such periods.

References

1. These figures were provided by L. J. Taylor, Librarian, The British Library (Library Association Library).

2. Colleges were established in Manchester (1851), Leeds (1874), Bristol (1876), Nottingham (1877), Birmingham (1880), Liverpool (1882), Reading (1892), Sheffield (1897), Exeter (1901), Southampton (1902), the University of Wales (1893). For an excellent, succinct account of British universities see W. H. G. Armytage, “The Universities of Britain,” in Commonwealth Universities Yearbook, 1976 (London: Association of Commonwealth Universities, 1976), p.180-97.


4. The UGC was “established by the issue of a Treasure Minute in July, 1919.” “It is not a statutory body, and there is no legislation governing its existence.” It might have been expected that such a committee would have been subordinated to the Board of Education so placing all levels of education under one government department. It was the susceptibilities of the universities that were being protected by placing the UGC under the wing of the Treasury. Since this department of government had no direct interest in education the opportunities for state intervention therefore would be reduced. In 1919-20 the UGC distributed £692,000 to universities; in 1977-78 the monies to be distributed had reached £597 million. The magnitude is a partial comment on inflation, but it represents, more accurately, the degree to which British universities have become de-
dependent on state support. The protective separation of the UGC has been ended. The committee is now under the Department of Education.

5. Armoitge, “The Universities of Britain,” p.188.


13. Ibid., p.90.


15. Ibid., p.25.


17. Ibid., p.30.

18. Ibid., p.67.

19. Ibid., p.25.


29. “We found little evidence that the problems raised by the Nuffield Foundation surveys or the questions such as those raised above were being considered systematically by the universities or their librarians. Accordingly, we decided, after consultation with the Committee of Vice-Chancellors and Principals, to set up a Committee to advise us on these issues.” Ibid., p.15.


37. Ibid.


42. R. Sergeant et al., *The Sheffield Manpower Project: A Survey of Staffing Requirements for Librarianship and Information Work* (Sheffield: University of Sheffield, Postgraduate School of Librarianship and Information Science, 1976).


51. This project was established following the publication of T. D. Wilson and W. A. J. Masterson, *Local Library Cooperation* (Sheffield: University of Sheffield, 1974).

52. I owe this particular point to Professor W. L. Saunders.


64. For a full and balanced appraisal of the Atkinson Report see the review by W. L. Saunders in *Journal of Documentation* 33: 160–64 (June 1977).
The British Library Lending Division is the only national library specifically devoted to interlending and receives an average of nearly 11,000 requests every working day, of which over 15 percent are from overseas. In addition, the library is actively concerned with promoting the use of published information and has education, translating, and publications programs to help achieve this end. The development of these programs is briefly described, and current Lending Division publications are listed. Courses, translating services, and publications assist the library’s users at home and abroad and contribute to bibliographic access, to the professional literature, and to the general dissemination of knowledge.

Courses and Seminars

In the early 1960s it became clear that academic libraries in the United Kingdom, while many of them gave orientation talks to new students, were making little effort to assist their clients in the effective use of literature—a task that was becoming more urgent as both the volume of literature and the complexity of secondary services developed.

Since the National Lending Library for Science and Technology, as it was then, had a very large stock of literature, it seemed important to maximize the use of this and, at the same time, to provide some assistance to academic libraries. A program of courses was therefore developed, aimed principally at academic library staff and research workers to familiarize them with the problem of using the literature and also provide them with a possible model for courses that could be run in their own institutions.

In the last ten years more than 1,500 

A. G. MYATT

Promoting the Use of Literature at Boston Spa

THE ACTIVITIES of the British Library Lending Division as a centralized loan and photocopy service are well known.1-3 Currently it is handling three quarters of all interlibrary loan requests originating in Great Britain, nearly 84 percent of which are satisfied from its own holdings. It is the only national library specifically dedicated to interlending and receives an average of nearly 11,000 requests every working day, of which over 15 percent are from overseas.

However, the Lending Division, in addition to collecting material as comprehensively as possible and making it available through a worldwide network of centers, has a number of other functions that are more or less closely related to interlending, but which are probably less familiar. These functions are mainly concerned with promoting the use of published information. To help achieve this the library conducts three major programs: in education, translating, and publishing.

A. G. Myatt is head of external relations and services, British Library Lending Division, Boston Spa.
people have attended courses and seminars at Boston Spa. The majority have been “use of literature” courses in science, technology, and the social sciences and have been attended by library staff and academic staff working within higher or continuing education.

Typically, a course lasts for about a week and includes lectures on subjects such as secondary services, reports, dissertations, foreign literature, and translations. The main emphasis in all courses is on practical work, to which at least half of the total time of each course is given. Some stress is placed on the importance of the published guides to the literature available at Boston Spa, the most important of which are housed in the Lending Division’s public reading room.

Experience suggests that those who attended the courses fell into three main categories with rather different motivations. They were either library staff seeking general additional training, librarians seeking training specifically in the use of scientific literature, or research workers with a need to use the literature.

In latter years the second group was rather smaller, probably because more library staff were entering the United Kingdom profession with a scientific background. Since the creation of the British Library a good deal of thought has been given to the future of short course provision in the British Library as a whole. As far as the Lending Division is concerned, it was decided that the courses should reflect the broadening scope of the Lending Division and, in conjunction with York University Library, courses are now also offered on the use of the literature of the humanities.

The Lending Division’s courses have contributed greatly to the development of similar and related courses in academic libraries from the 1960s, an influence that has been widely acknowledged.

Few British academic librarians involved in library and information instruction have not attended at least one course at Boston Spa, benefiting not only from the course itself but from exposure to a very wide range of secondary services and other bibliographic tools. At the same time, the courses have been an invaluable means of contact be-
between the Lending Division and its users.

**Translating**

This activity has been developed from the government-sponsored translation program previously organized by the National Lending Library for Science and Technology. The program covers the translation of whole journals as well as individual articles and books. Its two main aims are clearly related to the main function of the library: to improve access of researchers to literature in foreign languages, especially Russian and Japanese; and to build up the division's stock of literature in English to meet the demands of users who cannot read the original.

**Translated Journals**

The Lending Division sponsors the publication of eleven journals consisting entirely of translations (see Appendix I). The translation, editing, printing, and distribution of each journal are carried out on the Lending Division's behalf by learned societies, research associations, and commercial publishers.

The majority are cover-to-cover translations of single Russian journals; some are selective in that ephemeral or non-scientific articles are omitted; and two contain articles from more than one journal. The first of these, *Steel in the USSR*, is based on articles appearing in two Russian metallurgical journals; and the second, *International Polymer Science and Technology*, contains papers from a number of Russian, East European, and Japanese science journals. The latter is perhaps better regarded as a translation service in its own right, since subscribers are given the opportunity to participate in the processes of selection.

**Ad Hoc Article Translating**

Since the early 1960s the National Lending Library for Science and Technology, and later the British Library Lending Division, has provided a translating service for articles for United Kingdom users. The service was initially concerned with science and technology but now covers all subjects. The scheme was originally restricted to the translation of articles from Russian but was extended in 1968 to other Cyrillic languages and Japanese, to other Slavonic languages in 1969, to German in 1974, and to all languages in 1976.

All articles are sent to professional translators, since only in this way can the wide range of subject and language expertise required be obtained. The conditions under which translations can be supplied under this service have remained unchanged:

1. If possible, an English abstract or summary should have been checked to ensure that the translation is really needed. Where such a summary has not been consulted, the library will endeavor to provide one.
2. The article must not be from a journal scheduled for translation from cover to cover.
3. The translation must be edited by the requester.
4. The translation must be for private use and not for publication.

Charges were introduced at the end of 1974, the aim being to recover the expenditure on translators' fees but not overheads, staff costs, accommodation, or materials. The person requesting the translation was charged an amount calculated to produce 40 percent of the fee, the remaining 60 percent being recouped from subsequent sales on the basis that there are an average of three subsequent requests for each translation.

Predictably, there was a reduction in demand for the service as a result of the imposition of charges, but recently, demand has begun to increase and
around 700 requests are expected in 1977. Most of the current demand is now from industry, mainly in the applied sciences and increasingly from Western European languages. The greatest single advantage to the user as a result of this service is that extensive checking is done for each request.

Only when it is clear that no translation exists or will be made as a result of a cover-to-cover translation program is a new translation made. However, although requesters pay toward the cost of the translation, this does not give them the sole rights over its use. The Lending Division takes active steps to publicize translations and to sell them to other interested parties who may be in direct competition with the initial requester.

**Book Translations**

The Lending Division is also prepared to organize and publish the translation of books if a requester in the United Kingdom can demonstrate that there is no English language equivalent to the book in question and that the translation will fill a definite gap in Western knowledge. As with the article translation scheme, the requester is expected to edit the translation and make a contribution toward the cost of having it produced.

Currently about five book translations are produced in this way every year. They are announced in the *British National Bibliography* and are available for purchase from the Lending Division. The library has, to date, published translations of more than 130 books in a variety of fields. Some have been produced in conjunction with commercial publishers; others have been produced by the Lending Division on the advice of an individual who is an expert in the field. No special restriction is applied to the Lending Division service, but in practice most requests are in science and technology.

Although the Lending Division has publicized the book translating program, comparatively few orders are received for most of the translations. Although some titles are subsequently sold in large numbers, it is difficult to predict at the stage of an initial request which will prove to be “popular.” It is not easy to predict which titles are likely to fill gaps in Western knowledge, as a considerable time lag exists between the publication of a Russian original, for example, and a request for a translation. By the time the translated version is requested, the Russian version may have been publicly available in the West for several years.

The Lending Division regularly receives requests from abroad to have article or book translations made through this program. Although the translating service is restricted to requesters in the United Kingdom at the present time, it is possible that this restriction might eventually be removed.

**The Collection of Translations at Boston Spa**

Both the National Lending Library for Science and Technology and the National Central Library collected published translations into English; and the Lending Division now acquires translations of monographs, individual articles, and complete journals in all subject fields. The combined collection now numbers more than 400,000 individual items, together with all issues of more than 250 translated journals.

The principal sources of translations are the National Translations Center in the United States, with which the Lending Division has an exchange agreement; the National Technical Information Service, which supplies many U.S. government-sponsored translations; and firms, universities, government departments, and commercial publishers. The annual intake from these sources is more than 20,000 translations. The
Lending Division’s own translation program results in a further 700 being added to the collection each year. The majority of translations are acquired in “semipublished” form. Most of those from the United States are received in microform, while the majority of the remainder are held as duplicated type-scripts.

All the translations received in the Lending Division are indexed under the foreign journal title or, in the case of books, under author and translated title. The Lending Division is prepared to accept inquiries regarding the availability of translations of foreign language articles and books from individuals and organizations, both in the United Kingdom and abroad. About 30,000 inquiries are dealt with annually. If a translation cannot be located at the Lending Division, a check may be made with Aslib’s translation index.

Publications and Publishing

The British Library Lending Division is both a publisher and distributor of a number of publications. Perhaps the most interesting of the division’s publications is its Keyword Index of Conferences. The index, which now contains references to more than 75,000 conferences in the Lending Division collection, is made available as a series of publications. These give access to a type of material which can be very difficult to trace in conventional bibliographic tools. The index is currently published monthly under the title Index of Conference Proceedings Received. (See figure 1.) Annual cumulations have been published for 1974 and subsequent years. 1976 Annual Cumulation indexes the 10,400 conferences received in 1976. The ten-year cumulation, BLL Conference Index 1964–1973, contains details of 46,500 conferences under 27,500 keyword headings.

Current Serials Received, published in July 1977, lists 48,750 serial titles received by the Lending Division on that date. The titles cover all subject fields and are divided into three sections: all titles excluding Cyrillic serials; Slavonic serial titles which are given in Roman alphabet; and cover-to-cover translations of Cyrillic serials.

The Lending Division’s collection of cover-to-cover or selected translation journals is listed in Journals in Translation by alphabetical order of title, with a keyword index to subjects. (See figure 2.) The next edition of this publication will be published by the Lending Division jointly with the International Translations Centre (ITC) of Delft in The Netherlands and will probably be available early in 1978. It will also replace the ITC publication, Translations Journals.

“Collected Translations” is a series of translations grouped under broad subheads of translations prepared under the ad hoc scheme. To date, collections of translations of Archaeology, Ornithology, Creep Ecology, Marine Ecology, Reservoir Ecology, and Fish Farming have been published in the Lending Division.

The gratis publication, Translated Books Available from the BLLD, lists 120 books of which translations have been sponsored under the division’s translating program and which are currently available from Boston Spa. Full bibliographical details about each book are given, together with a short description of the contents.

The Lending Division publishes its own journal, BLL Review, which appears quarterly. Initially a house journal, it gradually has become much more than this. It is now the only library journal specifically concerned with interlending, a topic of major and increasing importance. Many articles relate, of course, to interlending in the United Kingdom (the annual report of the Lending Division itself appears in the Review). More recently it has become
INSERM (continued)

May 75 LES MYCOTOXINES- COMMUNICATIONS- COLLOQUE- INSERM- INSTITUT NATIONAL DE LA SANTE ET DE LA RECHERCHE MEDICALE

Jun 75 LIVER DISEASES IN CHILDREN- PROCEEDINGS OF A COLLOQUIUM- INSERM- INSTITUT NATIONAL DE LA SANTE ET DE LA RECHERCHE MEDICALE

Jul 75 SMOOTH MUSCLE PHARMACOLOGY AND PHYSIOLOGY- PROCEEDINGS OF A COLLOQUIUM- INSERM- INSTITUT NATIONAL DE LA SANTE ET DE LA RECHERCHE MEDICALE

Sep 75 DISTRIBUTION DES ECHANGES GAZEUX PULMONAIRES- ACTES- COLLOQUE- INSERM- INSTITUT NATIONAL DE LA SANTE ET DE LA RECHERCHE MEDICALE

Mar 76 RESPIRATORY CENTRES AND AFFERENT SYSTEMS- PROCEEDINGS OF A COLLOQUIUM- INSERM- INSTITUT NATIONAL DE LA SANTE ET DE LA RECHERCHE MEDICALE

Apr 76 COMMUNICATIONS- SEMINARE TECHNOLOGIQUE SUR LES NOUVELLES TECHNIQUES D'ETUDE DES PLAQUETTES SANGUINES- INSERM- INSTITUT NATIONAL DE LA SANTE ET DE LA RECHERCHE MEDICALE

May 76 LES TECHNIQUES DE SEPARATION ET D'IDENTIFICATION DES LYMPHOCYTES HUMAINS- ACTES- SEMINARE TECHNOLOGIQUE- INSERM- INSTITUT NATIONAL DE LA SANTE ET DE LA RECHERCHE MEDICALE

Jun 76 PRENATAL DIAGNOSIS- PROCEEDINGS OF A COLLOQUIUM- INSERM- INSTITUT NATIONAL DE LA SANTE ET DE LA RECHERCHE MEDICALE

INSTITUTIONS

Nov 74 INSTITUTIONS, POLICIES AND ECONOMIC PERFORMANCE- PAPERS PRESENTED AT A CARNEGIE-ROCHESTER CONFERENCE ON PUBLIC POLICY

Apr 75 INSTITUTIONS, POLICIES AND ECONOMIC PERFORMANCE- PAPERS PRESENTED AT A CARNEGIE-ROCHESTER CONFERENCE ON PUBLIC POLICY

INSTRUCTION

Sep 75 PROCEEDINGS OF THE SECTION ON INSTRUCTION OF THE 80TH ANNUAL MEETING OF THE AMERICAN ACADEMY OF OPHTHALMOLOGY AND OTOLARYNGOLOGY

Apr 76 PAPERS AND REPORT OF THE CCAIT SPRING CONFERENCE ON INSTRUCTIONAL CHANGE STRATEGIES- COMMUNITY COLLEGE ASSOCIATION FOR INSTRUCTION AND TECHNOLOGY

INSTRUCTIONAL CHANGE STRATEGIES

Apr 76 PAPERS AND REPORT OF THE CCAIT SPRING CONFERENCE ON INSTRUCTIONAL CHANGE STRATEGIES- COMMUNITY COLLEGE ASSOCIATION FOR INSTRUCTION AND TECHNOLOGY

INSTRUCTIONAL DEVELOPMENT

Mar 76 SUMMARY OF A WORKSHOP ON INSTRUCTIONAL DEVELOPMENT- ONTARIO UNIVERSITIES PROGRAM FOR INSTRUCTIONAL DEVELOPMENT

INSTRUMENTATION

Jul 76 INSTRUMENTATION FOR MECHANICAL ANALYSIS- COURSE NOTES FROM AN INTENSIVE SHORT COURSE- ENGINEERING SUMMER CONFERENCE- COLLEGE OF ENGINEERING, UNIVERSITY OF MICHIGAN

INSTRUMENTATION SYSTEMS

Jul 76 LOGICAL DESIGN FOR DIGITAL COMPUTER AND INSTRUMENTATION SYSTEMS- COURSE NOTES FROM AN INTENSIVE SHORT COURSE- ENGINEERING SUMMER CONFERENCE- COLLEGE OF ENGINEERING, UNIVERSITY OF MICHIGAN

INTELLIGENCE

May 74 HUMAN DIVERSITY: ITS CAUSES AND SOCIAL SIGNIFICANCE- PROCEEDINGS OF A SEMINAR ON INTELLIGENCE AND GROUP DIFFERENCES- SEMINAR IN A SERIES OF SEMINARS OF THE NATIONAL HUMAN DEVELOPMENT PROGRAM, HUMAN DEVELOPMENT CENTER, WILFRED LAURIER UNIVERSITY

Fig. 1

A Page from Index of Conference Proceedings Received
A Page from Journals in Translation
A Page from Serial Publications of the European Communities and Its Institutions Held by the BLLD
a vehicle for papers on international lending and on the interlending system of other countries, including, to date, the U.S.A., USSR, Scandinavia, and the Federal Republic of Germany. In 1978 the journal will change its title to become Interlending Review: Journal of the British Library Lending Division.

Several of the publications are available free of charge, mostly relating to the services of the library. The British Library Lending Division: A Brief Guide to its Services for Overseas Users is issued at intervals and presents a general outline of the division’s services. It is also available in Italian and Spanish versions.

The Lending Division holds a comprehensive collection of EEC serials, which are listed in a free publication, Serial Publications of the European Communities and its Institutions Held by the BLLD. Titles are cross-referenced from French and German to the English title where they appear in the publications. Shelf marks are also given.

An IFLA Office for International Lending was established at Boston Spa in 1975. One of its activities is to collect basic information to aid libraries throughout the world in their international lending transactions. A Brief

Guide to Centres of International Lending and Photocopying is published by the Office. It gives under each country the main characteristics of its international lending system, addresses to which requests should be sent, any restrictions imposed, and the length of the loan period.

The British Library Press and Public Relations Section produces a monthly publication, British Library News, which is distributed gratis to interested organizations at home and abroad. It is available free on request, as also is the British Library’s Annual Report 1976/77.

All of the publications mentioned above are available from the British Library Lending Division, Boston Spa, Wetherby, West Yorkshire, United Kingdom LS23 7BQ. Order forms for publications will be sent on request.

CONCLUSION

As noted in the introduction, the activities described above are peripheral to the major interlending function of the British Library, but they add up to a substantial body of activities in their own right, not only aiding users of the library’s services but contributing to bibliographic access to the professional literature and to the general dissemination of knowledge.

REFERENCES

APPENDIX 1

TRANSLATED JOURNALS
PUBLISHED ON BEHALF OF THE BRITISH LIBRARY LENDING DIVISION

Automatic Welding
Welding Institute
Abington Hall
Abington
Cambridge CB1 6AL

International Polymer Science and Technology
RAPRA
Shawbury
Shropshire SY4 4NR

Machines and Tooling
PERA
Melton Mowbray
Leicestershire LE13 OPB

Russian Chemical Reviews
The Chemical Society
Burlington House
London WC1B 5DT

Russian Journal of Inorganic Chemistry
The Chemical Society
Burlington House
London WC1B 5DT

Russian Journal of Physical Chemistry
The Chemical Society
Burlington House
London WC1B 5DT

Russian Mathematical Surveys
Macmillan & Co Ltd
4 Little Essex Street
London WC2R 3LF

Steel in the USSR
The Metals Society
1 Carlton House Terrace
London SW1Y 5DB

Thermal Engineering
Pergamon Press Ltd
Headington Hill Hall
Oxford OX3 OBW

Welding Production
Welding Institute
Abington Hall
Abington
Cambridge CB1 6AL
The University of Sussex Library, Brighton. Designed by Sir Basil Spence, the building was completed in 1966, with an extension to the rear in 1971. It has a capacity for more than 500,000 volumes and 1,000 readers.

Reading and study areas, University of Sussex Library, Brighton.
The Library, University of Reading. Completed in 1963, this building has a capacity for 500,000 volumes and 583 readers.

Ground floor, the Library, University of Reading.
Arts and Social Studies Library, University College, Cardiff. Opened in 1975, the library has space for 445,000 volumes and 600 readers.

Entrance area, Arts and Social Studies Library, University College, Cardiff.
J. B. Morrell Library, University of York. Occupied in 1966, this building is the first stage of a multi-stage building and has a capacity for 250,000 volumes and 450 readers.

Stack and reading area, J. B. Morrell Library, University of York.
Main Library, extension II, Swansea University College. View of south facade. This extension, completed in 1974, has stack area on two lower floors and reading rooms above.

University of Lancaster Library. Completed in three stages—1966, 1968, and 1970—the library has seating for 1,000 readers and shelving for 450,000 volumes.
University Library, University of Nottingham. Opened in 1973, this building houses the collections in arts and social sciences as well as an extensive manuscripts department and a photographic unit.

University of Leicester Library. Completed in 1974, the library has seating for 800 readers and shelving for 500,000 volumes. As stated by the architect, Castle Park Dean Hook, "The building has been designed to give a high level of thermal capacity: to achieve this the external walls are dense concrete blockwork faced with solar heat reflecting glass, whilst the asphalt roof is kept covered with water."
South Library, University of Leeds. Opened in 1975, this building houses a working collection ("undergraduate library") and the main science and applied science collections. (The Brotherton Library, 1936, continues as the main arts and social science library.) Architects: Chamberlain Powell & Bon.

Entrance floor, South Library, University of Leeds.
Sydney Jones Library, University of Liverpool. Opened in 1976, this library serves the Faculties of Arts and of Social and Environmental Studies. This first stage has accommodation for 700,000 volumes and 670 readers. Architects: Sir Basil Spence, Glover & Ferguson (Edinburgh).

Study carrel, Sydney Jones Library, University of Liverpool.
Library, University of Stirling. Completed in 1971, this four-story library has seating for 800 readers and 14,000 linear m. of shelving. Architects: Robert Matthew, Johnson—Marshall & Partners.

The University Library, University of Kent at Canterbury. Completed in 1973, the library was erected in two stages—the first by William Holford and Partners and the second by Farmer and Dark.
Main Library, University of Edinburgh. View of north facade and entrance, George Square. This library, opened in 1967, was designed by Sir Basil Spence, Glover & Ferguson (Edinburgh).

Service desk, ground floor, Main Library, University of Edinburgh.
The Library, University of East Anglia, Norwich. Constructed in two stages (1968 and 1974), the library has space for 450,000 volumes and 1,300 readers. Access is at a middle level with two floors above and two below for collections and reading areas. Architects: Sir Denys Lasdun and Partners, Stage I; Feilden and Mawson, Stage II.

ACKNOWLEDGMENTS

For this photographic visit to British university libraries we are indebted to numerous institutions and their librarians as listed below:

University College, Cardiff: H. A. Cufflin, deputy librarian; University of East Anglia, Norwich: W. L. Gutsman, librarian; University of Edinburgh: P. B. Freshwater, deputy librarian; University of Kent at Canterbury: G. S. Darlow, librarian; University of Lancaster: A. Davies, librarian; University of Leeds: D. Cox, librarian; University of Leicester: Douglas G. F. Walker, librarian; University of Liverpool: V. E. Knight, university librarian; University of Nottingham: R. S. Smith, librarian; University of Reading: James Thompson, librarian; University of Stirling: P. G. Peacock, librarian; University of Sussex: P. R. Lewis, librarian; University College of Swansea: D. M. Ellis, deputy librarian; and University of York: Harry Fairhurst, librarian.
Involving Consultants in Library Change

Most of the literature about consultants in the field of academic librarianship relates to the construction of library facilities. By combining pointers from the business field, where application of the consulting engagement has touched upon a broader range of activities, a more general discussion is presented regarding the need and preparation for and the selection of library consultants. These activities are presented as steps in the organizational change process. First, a decision model is presented for determining the need for a library consultant. Second, preparation for the consulting engagement is discussed. Finally, recommendations are set forth for the selection of an appropriate consulting firm or individual.

If we were to paraphrase the Association of Consulting Management Engineers' definition of a management consultant, we might arrive at the following definition for a library consultant:

A library consultant may be defined as an individual qualified by education, experience, technical ability, and temperament to advise or assist on a professional basis in identifying, defining, and solving specific library problems involving the organization, planning, direction, control, and operation of a library. The consultant serves the library as an impartial, objective advisor and is not an employee of its organization.¹

Robert Rohlf, director of Minnesota's Hennepin County Library, and a noted library consultant, distinguishes the role of the consultant by drawing a line between those who work on a project from its inception to the final assessment and those who simply provide advice or assistance at a particular point in the process.² The latter is termed a "critic" by Rohlf.

If we accept this basic definition, along with the distinction between "critic" and consultant, we then might ask what roles consultants have played in library change.

The role of the consultant, as opposed to the critic, has evolved largely since the mid-1950s and the passage of the Library Services and Construction Act. Thus, from the beginning, library consultants have been associated with the construction of library facilities.³

The increasing complexity of library services and operations has meant that the successful building project was the one whose every aspect was scrutinized, both in terms of the present and the future. Given such diverse concerns as audiovisual materials, microforms, computer processing, aesthetics, security, acoustics, lighting, ventilation and temperature control, legal requirements, differing managerial styles, and changes in nearly every facet of library opera-

James D. Lockwood is reference librarian, Law Library, Indiana University, Bloomington.

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tions, it is understandable that outside experts were engaged to assist in the entire planning and construction process.

The construction boom no longer proceeds at the rate it did in the 1960s. Changes in services and operations, however, are continually being considered, planned, and put into action. Specialists still are being called upon, but the literature on the use of these specialists refers largely to construction projects. It is precisely for this reason that literature from business, where application of the consulting engagement has touched upon a broader range of activities, is drawn upon to round out our view of the use of outside assistance.

This paper is designed as a guide to librarians considering possibilities for undertaking some form of organizational or physical change. Be it a change in library facilities, services, or operations, it will do the planning body of the library well to consider systematically the need for a consultant. The first section of the paper presents a model designed to aid in that attempt. Once this has been done, if the decision has been made to seek the services of an outside consultant, it will be in the best interests of the library staff and users for that same planning body to prepare for the consulting engagement and to design a suitable selection process. The latter two sections of the paper deal with these two steps, respectively.

The basic change process for most libraries will begin with the awareness, on the part of the director or other person in a position of major responsibility, of a need for change. The director will, quite likely, rely on input and assistance from all individuals responsible for areas in which there appears to be a need for change. As formally constituted, this group will be called the planning committee for the sake of uniformity. For the most part, groups of this nature will proceed through a process such as that outlined below:

### Involving Consultants

<table>
<thead>
<tr>
<th>I. Planning Committee</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Definition of the problem in terms of the objectives</td>
</tr>
<tr>
<td>B. Determination of the necessity for a consultant</td>
</tr>
<tr>
<td>C. Preparation for the consulting engagement</td>
</tr>
<tr>
<td>D. Selection of consultant(s)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>II. Planning Committee and the Consultant(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Review and redefinition of the problems and objectives</td>
</tr>
<tr>
<td>B. Development of alternative solutions</td>
</tr>
<tr>
<td>C. Evaluation of alternatives and selection among them</td>
</tr>
<tr>
<td>D. Development of action plan, including feedback mechanisms</td>
</tr>
<tr>
<td>E. Implementation of project, with adjustments as necessary</td>
</tr>
<tr>
<td>F. Assessment of results obtained and procedure used</td>
</tr>
</tbody>
</table>

The three steps which this paper addresses are IB, C, and D. We will consider the determination of need for outside assistance and then proceed to the latter two phases of the process. It should be noted that in most instances where consultants are not engaged the process moves directly from IA to IIB.

### Determining the Need For Assistance From Outside the Library

When considering prospects for change, regardless of its nature, there is usually some concern over how important decisions are made. Who should be involved, what data are necessary to support given alternative solutions, and similar concerns are commonly voiced.

The numerous benefits of the use of consultants have been spelled out clearly in the literature of both library science and business. Briefly, these include new ideas, fresh approaches, analytic ability, specialized skills and experiences, superior ability to introduce and implement change, ability to work on a specific problem with all resources at
one time, objectivity (both for political reasons of corroborating a desired point of view and in the sense of "no conflict of interest"), more up-to-date knowledge, and the fact that consultants are not permanent burdens to the organization's payroll.

Each of these potential benefits falls under one of three broad categories: skills and abilities, time factors, and objectivity and influence. Each of these dimensions will have considerable bearing on decision-making. If the objective is a well-chosen change program, appropriately introduced, then the quality of decisions throughout the entire process is of utmost concern.

In terms of increasing the quality of decisions, three factors operate that already might exist to the fullest extent necessary for the particular undertaking. The quality of the decisions made throughout the process outlined above is a function of (1) the number of alternatives considered, (2) the accuracy of the predictions about the consequences resulting from selecting each alternative, and (3) the nature and efficiency of the feedback mechanisms provided (allowing adjustments resulting from corrections, changes, etc.).

That is, all of the potential advantages could be present in the library to begin with, or adding a position for an individual processing the desired qualities may be possible. Some organizations, for example, believe it possible to set up internal consulting groups within their company, thus allowing for internal objectivity. This is viewed as increasing the number of alternatives considered and the accuracy of the predictions about the consequences of each.

The four basic sources of assistance for increasing the quality of decisions made during the change process are:

**Internal**

1. Utilize present staff
2. Add a specialist to the staff

**External**

E1: Engage a critic to review and provide assistance for a particular part of the program
E2: Engage a consultant (firm or individual)

Figure 1 presents a decision model based upon these four sources. It is important to note that although no one model or set of considerations can apply for all types of libraries or programs, there are several important steps that take place in assessing any library's situation.

The model is essentially a contingency model. As was stated above, it is quite possible that a given library might have all of the qualities and resources allowing the planning committee to arrive at high quality decisions. The ability to take advantage of this, however, is contingent upon the time considerations present. If prompt action is critical or if the use of staff time will severely curtail services, then it still may be wise to obtain assistance from outside.

The considerations, expressed in question form, are arranged along the top of the figure. To use the model for assistance in arriving at a decision, one moves along the decision tree from left to right. Barring the presence of any overriding external factors, the symbol at the terminal node designates one of the prescribed alternatives noted above. A discussion of the rationale of each of the twelve outcomes follows the description of each consideration.

The first two considerations in Figure 1 (A and B) focus on the locus of the expertise, which is important in assuring the likelihood of high quality decisions. Does it reside within the organization, or must it be obtained from outside? Consideration B simply assures economy in cases where expertise in most aspects of the project is already present. Consideration C is a second factor, further clarifying the temporariness-permanence dimension of the needed skill.

Time (Consideration D) is, in effect,
Library staff possess all expertise necessary to make high quality decisions?

A  Is expertise lacking only in one part of entire project?  

B  Is expertise needed for specified period only?  

C  Is time a crucial factor? (staff time limited or prompt action necessary)  

D  Is objectivity in only one part of project acceptable?  

E  Is objectivity a crucial factor?  

F

Fig. 1
Decision Model for Determining the Need for a Consultant
a measure of urgency and priority. As stated above, if prompt action is crucial (that is, if delays are costly to the library or its users), then outside help is sought, or there is a restructuring of priorities, e.g., the completion of the project overrides concern for staff assistance to the user.

The final two questions (E and F) must be considered while keeping two outcomes in mind. If objectivity is preferable for the purpose of (1) obtaining responsible analysis of data or of a particular situation or (2) providing an outside opinion because powerful decision-making bodies may be skeptical of internal opinions (i.e., perceived lack of quality decisions), then E must be answered in the affirmative. Consideration F provides for economy, as in cases where objectivity only is required at a particular phase.

The rationale for each of the twelve outcomes is as follows:

1—E2 If the present staff possess the necessary expertise, a lack of time alone is sufficient cause for obtaining outside help. If the quality of decisions is to be maintained, then we need not go so far as to explore the question of objectivity.

2—I1 & E1 The presence of expertise within the staff and its availability in terms of time still may not satisfy objectivity requirements. In this instance objectivity is required for only one part of the project, allowing the external critic to supplement the present staff.

3—E2 Outcome 3 is identical to Outcome 2, except that objectivity throughout the project requires the engagement of a consultant.

4—I1 This solution allows full reliance on present staff, who possess both the expertise and the time required, while objectivity is not crucial.

5—E1 If expertise is lacking but for only one segment of the undertaking, the next question becomes, “Is expertise required on a temporary or permanent basis?” In this case a critic can provide short-term aid in one segment of the project. Since a critic is one from the outside, the provision for objectivity is met without pursuing the two final considerations.

6—I2 & E1 This is identical to Outcome 5, but the permanence of the required expertise calls for the hiring of a competent specialist. This can be done in this instance since objectivity, although crucial, is only necessary to one part of the project. The result is that a critic may be employed for segments requiring objectivity. This supplements the qualities of the specialist.

7—E2 The distinguishing factor in this outcome is the requirement for objectivity throughout the project, while at the same time the limits of the need for expertise cannot be specified. Such a situation has no inexpensive solution. To assure objectivity, an outsider usually is deemed desirable. Nonetheless, over a lengthy period, outsiders may lose a degree of objectivity as well. Such instances may require a series of competent consultants. An example is a case requiring a specialist in affirmative action implementation, who for political reasons must remain outside the library’s employ.

8—I2 This solution is identical to Outcome 5, but the need for expertise on a permanent basis calls for the hiring of a specialist even when objectivity is not essential.

9—E2 When desired expertise is lacking for significant portions of a project and when the period of required expertise is delineated, then we have the classic consulting situation. Time and objectivity need not enter into consideration, as sufficient cause for aid on a temporary basis from outside the organization already exists.

10—I2 & E1 The three final outcomes
all represent a condition wherein expertise is lacking in a significant portion of the project, and that expertise will be required for an indefinite period. In Outcome 10, a suitable solution can be achieved by hiring a specialist, supplementing this individual’s expertise with the objectivity of a critic in the part of the project requiring that quality.

11–E2 The circumstances in Outcome 10 become considerably modified when objectivity is crucial throughout the project. This is a more extreme version of the circumstances presented in Outcome 7. As with Outcome 7, filling this need may prove to be expensive to the library.

12–12 In the final outcome, seeking a permanent specialist represents the ideal solution. What is called for is relatively broad based expertise in a given area over an indefinite period. Since objectivity is not a requisite, employing the specialist will assure the continuity of skills desired.

Through use of the considerations noted in Figure 1, a decision to utilize any one of the four basic sources of assistance could be reached. The remaining sections of the paper, while relevant to I2 and E1, assume that E2 is the prescribed solution. If the consultant is truly necessary, for any of the reasons stated above, the planning committee would do well to prepare for the rigor of a well-designed selection process and for the peculiarities of a consultancy relationship. The nature of a consultancy relationship calls for careful consideration of factors not normally taken into account in the hiring of regular staff.

**PREPARATION FOR THE CONSULTING ENGAGEMENT**

Preparation for a consulting engagement begins immediately upon the decision to seek the services of a consulting individual or firm. This section of the paper will present a series of steps through which the planning committee may increase the probability of a successful consulting engagement.

It is assumed by this point that all persons within or related to the library are aware of efforts being made to effect changes in the library. It also should be the case that these individuals are cognizant of the reasons for selecting someone from outside the library in order to achieve these changes more efficiently and effectively. This not only increases comprehension, thus allowing the library staff to be supportive, it also aids in the acceptance of the final recommendations.

This last statement may seem manipulative, but it is fair to say that this is the stage where the staff should be reminded to anticipate and facilitate change.

There are two major goals in the preparation for the consulting engagement. The first is to arrive at an agreement as to the planning committee's expectations of the consulting relationship. These might be called topics of mutual obligation and agreement. Once this has been done, a selection process should be designed to facilitate the identification and selection of a qualified consultant.

In terms of the first goal, it is important to be prepared to inform the consultant (in written form) of these expectations as well as to insure that the members of the committee come to an agreement among themselves.

Table 1 outlines the usual topics that the committee must take into account. As the nature of the change being undertaken may vary considerably, some of these might best be illustrated.

The first topic, the nature of the problem and the approach to the solution, while seemingly arrived at prior to the determination of the need for outside assistance, may need to be stated again. In most cases, and particularly
TABLE 1

TOPOICS OF MUTUAL OBLIGATION
AND AGREEMENT TO BE CONSIDERED

1. Nature of the problem and general approach
to the solution
2. Particular constraints present
3. Library liaison assigned
4. Time schedule for project
   A. Length
   B. Phases
   C. Portion of project consultant is involved
      with
   D. Length of workday
   E. Concurrent involvement in other activities
5. Subcontracting of particular portions of
   project
6. Final report
   A. Deadline
   B. Nature (e.g., oral or written)
   C. Confidentiality
   D. Other factors
7. Fees
   A. Type of fee arrangement
   B. Fee estimate
   C. Schedule of payments
8. Additional assistance to be provided by the
   library
   A. Travel expenses
   B. Materials and supplies
   C. Office and secretarial needs
   D. Special research needs

those requiring objectivity, this assures
greater likelihood of a successful ven-
ture. When soliciting proposals, a brief
statement of the problems will be neces-
sary.

The particular constraints of the sit-
uation may not be obvious at this point.
Many of them will, however, revolve
around the elements of policy, philosop-
hy of service, budgetary limitations,
time, and space.

It is generally advantageous to select
a library liaison, keeping a variety of
factors in mind. First, it is important
to specify simultaneously the roles of
the liaison, the consultant, the commit-
tee, and the director. Where will the
final authority lie? Will the consultant
be responsible for the project with only
specified exceptions, or will the con-
sultant be performing an advisory func-
tion only? The Vroom article presents

a model for rationally considering the
important factors involved in decisions
of this type.7

In any case, the liaison should be
someone who is not only influential and
knowledgeable but also accessible and
personable. A second person should be
designated in the event of the liaison’s
absence.

The fourth topic, that of time, has
several important facets. Maximum and
minimum estimates of length are a ne-
cessity, while particular phases or mile-
stones must be preset to allow for the
measurement of progress. Not all con-
sultants begin at the start of a project
nor carry through with follow-up stud-
ies after its completion. Any such ex-
ceptions should be made clear as soon
as possible.

Also under the time dimension come
two concerns that typically arise after
work has begun, thus causing hard feel-
ings. The first is that of establishing an
agreement on the length of a workday.
Many employers of consultants focus
most of their energies on the determina-
tion of the fee, only to learn that agree-
ment on a per diem basis is of limited
value without some agreement on the
definition of a workday. The second
sensitive area, like the first, is not a dif-
ficult problem as long as it is considered
during the selection process and not
after the project is half-completed, and
that is the need to determine what other
activities the consultant expects to be
participating in at the time. If the in-
dividual is a library director or has oth-
er engagements, it is fair to ask how
these will be handled concurrently and
if they will cause any undue delay.

One last comment on time: The com-
mittee should privately agree as to the
specific circumstances in which they
would seek termination of the con-
sulting engagement.

Subcontracting is a concern in two
basic ways. It is important to know the
weak points of a consultant prior to the
final selection. If data are to be analyzed or air conditioning checked, it would be advantageous to know whom the consultant has in mind as a subcontractor for these specialized analyses.

Sixth, the nature of the final report should be spelled out clearly. It may be that none is necessary. If one is, then any deadline should be specified, along with a statement as to the number of copies, confidentiality, the nature and number of oral presentations accompanying it, and some discussion as to copy or distribution rights.

The topic of fees often receives more emphasis than it is due. Throughout the literature there are claims by former employers of consultants, as well as by consultants themselves, stating that (1) if the library needs a consultant in the first place and (2) if it is careful in its selection and in its subsequent relationship, it probably will find that the consultant services are worth much more to the library than the actual fee paid. There are numerous discussions in the literature of types of fees and some of the related ethical concerns. Whatever the fee arrangement, it is best to establish, in writing, a final cost estimate and an agreed-upon schedule of payment.

Additional assistance to be provided by the library should function as a catchall for most items not covered above. Special research needs may not be clear until the approach to the particular problem is discussed. Computer time, or perhaps the availability of such implements as calculators or drafting tables, may be all that is necessary. In some instances payment of travel expenses and the availability of secretarial assistance are expected as well.

Once these topics have been discussed thoroughly by the committee, the second goal is to establish a selection procedure to be followed in the next step of the organizational change process. The procedure might follow the steps laid out in the final section of the paper.

As with the two previous stages in the organizational change process, the selection procedure will vary according to the specific nature of the problem. Another factor affecting the selection procedure in general is the estimated number of qualified consultants available. It is possible that the few available experts on a given problem are known. In this case it may be advantageous to review published reports or visit former employers prior to contacting the consultant.

In general, however, it is wise to follow a standard procedure which gives less preference to the notability of an individual. After all, one factor in the quality of the final decision is the number of alternatives. Therefore, it is best to optimize this factor from the very beginning.

The first step in the procedure is the identification of suitable candidates for the job. Brief discussions of some of the relative advantages and disadvantages of individual consultants and firms of various sizes are presented elsewhere and will not be covered here. Typical sources utilized in obtaining names are state library agencies, the Library Administration Division of the American Library Association, colleagues who have dealt with similar problems recently, and directories. If the nature of the problem is such that specialists in that field are likely to be members of a particular professional association, it would be wise to contact that association.

The second step, soliciting proposals, follows the period of preparation discussed in the previous section of the paper. The brief statement of the problem then is sent to likely candidates. Specifically, the desire for a brief proposal should be indicated as well as the probable procedure to be followed and
the candidate’s qualifications to perform such services. The committee should request supporting material in the form of reports, lists of similar undertakings, and a list of references from recent contractors.

The evaluation of the proposals is very important. It is of paramount concern that all statements and supporting documents be weighed in light of the requirements of the particular project on which the library is embarking. For example, does the consultant exhibit a basic understanding of the nature and scope of the particular task at hand? If so, are the approach and its probable consequences both practical and timely and consistent with the overall philosophy of library service at the institution? Having met these minimal qualifications, what merit does the proposal have when judged in light of the benefits and drawbacks of similar proposals?

Once a field of candidates has been narrowed down to the two or three most promising, it is necessary, and is considered common practice, to seek information as to the past performance of the individuals being considered. (If the services of a firm are under consideration, by all means determine exactly which individuals would be assigned, and their past records.) Such checks will provide more relevant information when the projects undertaken are similar in nature and scope to that intended for the project under consideration.

The following guidelines provide an approach to securing reference inquiry responses that are directly relevant to the selection discussion. After providing the reference with a brief statement of the work to be done, the following information should be requested:

1. How did the consultant’s task in that organization differ from the work to be done?

2. How did the consultant meet commitments in terms of the items in Table 1 (Topics of Mutual Obligation and Agreement to Be Considered)?

3. What is the reference’s overall evaluation of the consultant’s work?

4. Would the reference retain the services of the same consultant again?

This should be done in person, if possible. Phone calls would prove more productive than letters, if personal contact is not possible. Personal contact allows for more open interaction as well as visual inspection of the work that was done (if appropriate).

Hopefully, by the time the interview stage is reached, one or two candidates stand out as the most appropriate choices. In that the host library normally pays the expenses of the interview trip, it is to the advantage of the library to limit the number invited.

The interview provides an opportunity for the consultant to determine local circumstances and to offer the host library staff an opportunity to discuss the proposed project, the prospective consultant’s qualifications, and the specifics of the proposed solution.

The discussion of qualifications should include such topics as the consultant’s familiarity with the practice of consulting; evidence of specific skills and knowledge of relevant theory; awareness of recent trends; professional activities, recent experiences; and especially participation in workshops or some form of continuing education.

The interview also allows the planning committee an opportunity to assess the prospective consultant’s integrity, objectivity, analytic ability, level of energy, human relations and persuasive skills, maturity, and oral and written communications skills, both in the field of library science and in areas of his or her special competence. It is at this point that the committee must be wary of any guarantee of results, cost savings, or other such inducements.
One individual should have a keen interest in the interview in particular. It is the liaison who must assess the potential quality of the working relationship with the consultant throughout the length of the entire change process.

Finally, the list of topics of mutual obligation and agreement must be discussed. This will enable clarifications to be made so that a contract may be agreed upon quickly in the event of an affirmative decision.

The final evaluation should be confidential. A frank discussion, perhaps with one committee member assigned the position of the devil's advocate, should bring out any matter needing further clarification.

**Conclusion**

The literature is not lacking for complaints about the work of consultants. In return, there is no lack of complaints on the part of consultants about those attempting to make use of their services. On the other hand, there is no shortage of complaints about projects undertaken, poor solutions attempted, and disastrous results achieved, all in libraries without the presence of any outside assistance at all.

All of this points to the importance of a rational decision-making process, from the point of awareness of a need for change. Once a tentative determination of the problem has been achieved it is necessary to ask questions about the nature of the information and analyses likely to be required to reach a satisfactory solution. Does the organization possess all of the expertise required to reach high-quality decisions? The answer to that question lies in the particular nature of the problem and the expertise of the staff. Once answered, the importance of sufficient time and objectivity also must be weighed.

A framework for determining the need for outside assistance was presented in the form of a decision model. Once a need has been identified, preparation for and selection of the consultant also should follow a systematic procedure. By clearly specifying the committee's expectations, as well as the obligations of each participant, crucial steps for arriving at a satisfactory partnership have been accomplished.

By this point, the necessity for a consultant and the preferred relationship have been clarified. The final step in assuring the most promising progress toward the library's goal is to establish and carry out a systematic selection procedure such as that presented above.

To quote a common expression, "If you don't know where you are going, any road will take you there." This applies equally to libraries relying on their own staff as to those relying on poorly selected outsiders.

**References**


6. The basic decision tree model shown in Figure 1 is adapted from Victor H. Vroom, "A New Look at Managerial Decision Making," Organizational Dynamics 1:66 (Spring 1973), who developed a similar model for determining the appropriateness of authoritative, consultative, or group decisions in organizational decision-making situations. For a portrayal of the types of expertise required in a specific situation and the typical locus of responsibility for each area of a library building project, see Stephen Langmead and Margaret Beckman, New Library Design: Guide Lines to Planning Academic Library Buildings (Toronto: Wiley, 1970), p.118-25.

7. Vroom, "A New Look at Managerial Decision Making."


9. Fuchs, Making the Most of Management Consulting Services, chapter 3; Hollander, Management and Clients, introduction; and Shay, How to Get the Best Results from Management Consultants, p.9-10.


A Formula for Estimating Collection Use

A method is presented to estimate the proportion of books in a library which are responsible for the determination of the circulation performance rate of that library. The method is applied to a university library and to a public library with the finding that for the two libraries examined a much smaller proportion of the collection determines the circulation performance rate of the university library than for the public library.

In a recent article Daniel Gore defined the performance rate of a library as the measure of the percentage of all books patrons may want that are on the shelves when they want them. He suggested that a performance rate of 45 percent is typical for a university library. In the same article he then proceeded to indicate how the work of Richard Trueswell can be used to determine a criterion for weeding books from a collection in such a way as to allow the performance rate to jump to 81 percent. However, there is no theoretical foundation for the implications presented by Gore because the Trueswell criterion of last-circulation date measures circulation demand.

Current research has not firmly substantiated the idea that circulation use is a good indicator of overall use. Thus, Trueswell’s technique actually affects the circulation performance rate, which is the probability that a book which a patron wants for circulation purposes is in the stacks when he or she wants it. Trueswell’s technique trades a small percentage drop in the circulation performance rate for a large amount of space in the stacks. Trueswell has, in fact, published results which indicate that only 60 percent of the books in the stacks are satisfying 95 percent of the circulation demand for books in the collection. In this case, 40 percent of the amount of space currently utilized would be traded for a reduction in the circulation performance rate of 5 percent of its current value. Gore’s idea is that the performance rate could then be increased significantly by judiciously purchasing books to fill the amount of space created.

This article introduces a procedure which uses the last-circulation-date statistic to estimate the proportion of books in the stacks of a library which are responsible for the determination of the circulation performance rate. The estimate will not give us an indication of the rate value, but it will allow us to compute the percentage of books that actually are being used by the patrons for circulation. Results shown in this study indicate that this percentage may be much lower in university libraries than in public libraries. In fact, whereas Gore has implied that 50 percent of the cataloged books patrons want are not available on the shelves when they want them, this paper shows that at least 50 percent of those books

Stephen J. Turner is assistant professor, College of Business Administration, University of Akron, Akron, Ohio.
that are available for circulation are not used for circulation purposes. More will be said later after we have provided estimates of actual percentages.

One of the most appealing aspects of the estimation procedure is its simplicity. The librarian proceeds by conducting a random sampling of books from the stacks and circulation and then calculates the proportionate number of books having last-circulation dates in each sample. Our explanation of the estimation procedure requires the following definitions, and these terms will be used extensively in the description.

1. **Stack Population (SP):** A book is a member of the stack population if it is available to library patrons for outside use and is present in the library stacks. Suppose all books are removed from the stack population. Clearly, the circulation performance rate would be adversely affected to the extent that patrons who walked into the stack population area in anticipation of selecting a book for circulation would not find what they want. Equally as clear, if no books are removed, then there would be no effect on the circulation performance rate. Somewhere between no books and all books is a collection of books which could be removed from the stacks without affecting the circulation performance rate. If these books were removed from the stack population, then that collection of books remaining would be those which determine the circulation performance rate of the library. This leads us to the next definition.

2. **Circulation Core (CC):** A book is in the circulation core if it is a member of the special subsection of books in the stack population which determines the circulation performance rate of the library. A major proportion of the books which comprise the circulation core can be easily identified because they have a last-circulation date, as defined below.

3. **Last-Circulation Date (LCD):** The last-circulation date for a book in the stack population is its most recent due date. The last-circulation date for a book in circulation is its previous (as opposed to current) due date.

Perhaps the easiest way to show how the above classes of books are related is by means of the diagram shown in Figure 1, where:

**SET DESCRIPTION**

- **U** Books that have been acquired by the library
- **CCB** Currently Circulating Books (horizontally lined area)
- **A** Books in the circulation core that have not previously circulated (dotted area)
- **SLCD** Books in the Stack population having Last-Circulation Dates (i.e., that have previously circulated)
- **B** Books in the stack population that are not in the circulation core (vertically lined area)
- **SP** Books in the Stack Population (union of sets A, SLCD, and B)

From Figure 1 note that the union of sets A and SLCD represents the set of books in the Circulation Core (CC).

Next let **N(CC)** denote the number of elements in the set CC. Using this notation, the question of interest can now be stated as: How can the proportion

\[ \frac{N(CC)}{N(SP)} \]

be estimated?

In nonmathematical terms, the above ratio is the proportion of books in the stack population which are responsible for the determination of the circulation performance rate. The calculation of this ratio can provide an indication of the number of books from which past circulation performance rates have been determined and could be an indicator of the number of books that could be weeded from the stack population with-
The relationship between the books that currently are circulating (CCB), books in the circulation core (the union of sets A and SLCD), and books in the stack population (SP) out affecting the rate for the future.

The last-circulation-date statistic can be used in computing an estimate for the above ratio, and a method of sampling the above sets can be developed which will allow the calculation of a confidence interval for the ratio.

First, we obtain a sample from the set of books in the Circulation Core by examining all books which are returned to the library from circulation during a given time interval. Second, we assume a scheme such that each of the returned books has (1) its checkout card stamped with two or more different due dates or (2) has a checkout card that has been stamped with only one due date.

Our assumption is that each book will be a member of one of the two classes. In the first case the book is circulating for at least the second time and from the previous definition has a last-circulation date. In the second case the book is assumed to be circulating for the first time and does not have a last-circulation date.

Now let

CCS denote the set of books in the Circulation Core Sample;
CCSL denote the set of books in the Circulation Core Sample which have Last-circulation dates.

Then
\[ \frac{N(\text{CCSL})}{N(\text{CC})} \]

is an estimator of the proportion \( N(\text{SLCD})/N(\text{CC}) \), which is the ratio of the number of books in the stack population which have a last-circulation date to the total number of books in the circulation core.

Next, suppose a random sample of the stack population is taken and the number of books in the sample which have last-circulation dates is recorded. If

SPS denotes the set of all books in the Stack Population Sample and

SPSL denotes the set of all books in the Stack Population Sample which have a Last-circulation date, then

\[ \frac{N(\text{SPSL})}{N(\text{SP})} \]

is an estimator for the proportion \( N(\text{SLCD})/N(\text{SP}) \), which is the ratio of the number of books in the stack population which have a last-circulation date to the number of books in the stack population.

The two estimators above allow us to establish an estimator for \( N(\text{CC})/N(\text{SP}) \):

\[ \frac{N(\text{SPSL})}{N(\text{SP})} \frac{N(\text{CCSL})}{N(\text{CC})} \]

is an estimator for \( N(\text{SLCD})/N(\text{SP}) \); \( \frac{N(\text{CCSL})}{N(\text{CC})} \)

is an estimator for \( N(\text{SLCD})/N(\text{CC}) \),

so that

\[ r = \frac{N(\text{SPSL})/N(\text{SP})}{N(\text{CCSL})/N(\text{CC})} \]

is an estimator for \( \frac{N(\text{SLCD})}{N(\text{SP})} \frac{N(\text{CC})}{N(\text{SP})} \).

Thus, the ratio, \( r \), is an estimator for \( N(\text{CC})/N(\text{SP}) \), which was our main objective.

A confidence interval for \( N(\text{CC})/N(\text{SP}) \) also has been developed,\(^4\) with the end result being that we can find values of LB (Lower Bound) and UB (Upper Bound) for which

\[ \text{pr}(\text{LB} \leq N(\text{CC})/N(\text{SP}) \leq \text{UB}) \geq 0.95. \]

That is, we are at least 95 percent sure that the true ratio, \( N(\text{CC})/N(\text{SP}) \), lies between the values LB and UB. Examples now are provided which show the result of applying the theory to two different libraries.

A stack population sample and a circulation core sample were taken at the University of Massachusetts (Amherst) Main Library (UMass) in 1974 and at Forbes Public Library, Northampton, Massachusetts, in 1976. The results are summarized in Table 1.

From this table it can be stated that between 45.7 percent and 52.4 percent of the stack population determined the circulation performance rate for the UMass library in 1974 and that between 85.1 percent and 96.2 percent of the stack population determined the circulation performance rate for the Forbes library in 1976. We are at least 95 percent sure that the above bounds are correct.

Conclusions

The tabular results shown above indicate that there may be a significant difference between the proportionate sizes of the circulation cores in university and public libraries. Other samples from different libraries should be taken to see if this idea can be supported. The estimation procedure would key on the calculation of two ratios which require samples from the circulation core and stacks of the library. The details of the confidence interval calculation are omitted, but sample sizes of 3,000 books will normally be of sufficient size to guaran-
TABLE 1
INTERVAL ESTIMATES OF THE PROPORTION N(CC)/N(SP)
FOR THE UNIVERSITY OF MASSACHUSETTS AND FORBES LIBRARY COLLECTIONS

<table>
<thead>
<tr>
<th>Sample</th>
<th>Collection</th>
<th>Number in Sample</th>
<th>LB</th>
<th>r</th>
<th>UB</th>
</tr>
</thead>
<tbody>
<tr>
<td>stack population</td>
<td>UMass</td>
<td>2,286</td>
<td>.457</td>
<td>.490</td>
<td>.524</td>
</tr>
<tr>
<td>circulation core</td>
<td>UMass</td>
<td>5,875</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>stack population</td>
<td>Forbes</td>
<td>1,593</td>
<td>.851</td>
<td>.904</td>
<td>.962</td>
</tr>
<tr>
<td>circulation core</td>
<td>Forbes</td>
<td>1,155</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

tee that the ratio, r, will approximate the theoretical ratio, N(CC)/N(SP), to within ± 0.05 with at least 95 percent confidence.

The 0.49 value in Table 1 may be normal for a university library where large numbers of books are acquired each year and where the emphasis may be on the purchase of monographs which support institutional research objectives. This idea could be of interest from a management point of view if one desires to establish a rough estimate of a collection's circulation performance in relation to the same type of collection performance in other libraries of similar composition and objectives.

REFERENCES
Attribution of Library Costs

Universities conduct a variety of cost-allocation studies that require the collection and analysis of library-cost data. Cost accounting methods are used in most studies; however, costs are attributed to library user groups in a variety of ways. Cost accounting studies are reviewed and allocation methods discussed. Summary data from the Purdue University Libraries and Audio-Visual Center cost study are presented.

University administrators conduct a variety of cost studies aimed at determining the costs of instructional, research, and public service programs. The general purposes of these studies are to (1) examine the allocation of resources; (2) provide information for future budgeting; (3) provide a basis for comparison of similar activities; and (4) provide data for government agencies and associations.

While library services constitute a small portion of university budgets (usually 2–5 percent), they are an essential part of instructional and research programs. The costs associated with library services, because they are joint or indirect costs, represent a difficult allocation problem for the cost accountant.

This paper will review major library cost accounting studies, examine the methods currently in use to allocate library costs to instructional programs, and present comparative data derived from the application of these methods.

Library Cost Studies

Cost studies conducted at four major university libraries—Stanford, Columbia, University of California, and Purdue—are relevant to the topic of cost allocation. The Stanford study, conducted in 1964 and revised in 1970, was undertaken to determine the allocation of library costs to four major user groups: undergraduates, graduate students, faculty, and staff. Cost elements were developed for each cost center or facility in the library system. Population and circulation data were gathered and applied to costs to determine the cost to be charged to each user group. The total costs for each group were divided by the population to yield per capita cost and cost ratios.

A similar study was conducted by Gerald Quatman at Purdue University in 1961. The Quatman study was undertaken to provide data on the cost of providing library services for sponsored research programs. The study was unsatisfactory for three reasons: (1) Students and faculty populations were not calculated on the same basis; (2) actual research use could not be measured directly; and (3) the implicit assumption in the study was that “the average graduate student or faculty member engaging in sponsored research used the same amount of library services as the average graduate student or faculty member employed in other university duties.”

In 1968–69 Columbia University conducted surveys of use and cost to determine the cost that should be allocated to research. The allocation was based solely on use and not weighted by population. Analysis of survey data indicated...
that research accounted for 46.9 percent of library use; instruction 31.8 percent; both instruction and research 11.4 percent; and other 9 percent.

The Leimkuhler and Cooper study, conducted at the University of California in 1970, was undertaken to develop a cost-flow model for university libraries.\(^5\) Cost data were gathered and analyzed for cost centers, both processing and service. The study did not allocate costs to users; however, it did provide useful unit costs, such as cost per unit of circulation, cost per dollar acquisition, etc.

In 1976 the Purdue University Libraries and Audio-Visual Center completed a cost allocation study that was conducted for the purpose of supplying input data for the university’s program cost study.\(^6\) The specific objectives of the project were to determine the costs of providing library and audiovisual services and to allocate these costs to teaching departments and user groups within each department. The allocation methods used, and results, are presented below.

**Allocation Methods**

There are four basic methods for attributing the cost of library services to instructional and research programs. The first method uses faculty size as a base (usually on a full-time equivalent (FTE) basis) and divides costs according to the proportion of faculty FTEs in each department. Student enrollment, number of courses offered, number of graduate students, and other variables that are related to library costs are not considered in this method.

The underlying assumptions of this technique are that library usage for any single department or program is proportional to the size of faculty associated with the department and per capita usage is the same for all departments. Circulation data from a cost study of the Purdue University Libraries and Audio-Visual Center show these assumptions to be false.

For example, the English faculty at Purdue represented 4 percent of the faculty population, but their library loans were 8 percent of loans to all faculty during the sample period. Per capita loans to faculty in the English department were 11.2, while per capita loans to the civil engineering faculty were 3.7.\(^7\)

The second method of library cost allocation is the standard technique for distribution of indirect costs and is based on faculty salaries. The National Center for Higher Education Management Systems (NCHEMS) recommends that library costs be allocated according to compensation adjusted by faculty activity analysis.\(^8\) This technique suggests that library usage varies in proportion to the compensation being paid and time spent on various activities. Higher salaried departments carry a higher share of library costs. In addition, the division of library costs between research and instruction, produced by the faculty activity analysis, is proportional to the time spent by faculty members in each activity.

The application of this method does not account for the type of instruction or the type of research being performed by the departments. Humanities departments, where research and instruction rely heavily on library resources, generally provide lower faculty salaries than science and engineering departments, where both teaching and research are more laboratory oriented and less dependent on the library.

NCHEMS also suggests that a library can be costed directly if it is identified with a particular school or college. For example, a library that is associated with a college of business administration would be considered part of that college, with the cost of library services allocated entirely to business administration programs. This method is based
on intended use, which will be discussed below.

**METHODS BASED ON USE**

The last two methods of library cost allocation are based on usage but differ in their assumptions and applications. One method is based on intended use or direct cost and the other on actual use.

The intended use approach assumes that library materials and services are provided by a university with the intent that they be used by specific groups. While the technique has the advantages of direct costing and relatively simple data gathering, it does not result in an accurate summary of program cost. In earlier days when academic disciplines were purer, books purchased in a subject area were likely to be used almost exclusively by people in that discipline. With the increase in interdisciplinary studies and research, library materials in any one discipline are serving needs of people outside the discipline as well as people who are associated with the particular subject area.

For example, the Purdue Libraries circulation study indicated that 58 percent of the loans made from the Krannert Library, School of Management, were made to faculty and students associated with programs in management or agricultural economics. People in fields other than those served by the library accounted for 42 percent of the loans and included engineers, home economists, pharmacists, and others.9

Trends in both research and instruction suggest that interdisciplinary activity is increasing. As a result of this increase, usage patterns in libraries will show more diverse populations using the literature in all fields. It is no longer realistic to assume that economics books will be used exclusively by economists or that use of psychology books will be restricted to psychology majors. A more accurate distribution of library costs will result if actual usage is considered.

The actual use approach of allocating library costs is based on the theory that library services are offered to the total community and that the groups that use them should bear the burden in proportion to their actual usage. The method requires data on the identity of user groups and their use of library services.

While statistics, such as number of reference questions answered and in-house use of library materials, are useful, they are costly to collect and process. Recorded circulation is the most convenient statistic to collect, and it gives a reasonably accurate estimate of the usage of the library by different user groups. The cost of collecting circulation data in libraries that use manual circulation systems will vary with the type of system being used. Hand tabulation of library use may not be cost justified. Allocation of library costs using the actual use approach, however, does provide a more accurate library cost component for university programs.

**RESEARCH COSTS**

Satisfactory methods for allocating library costs between research and instruction in conventional academic libraries have not been developed. When faculty members or graduate students borrow materials from the library, the only way of determining how the material is to be used is to ask. This method was used in the Columbia and Stanford studies discussed above.

The Columbia study concluded that 52.6 percent of library use was attributable to research. The 1970 Stanford study allocated 30.9 percent of library costs to research. The primary drawback of user surveys to determine research or instructional use is that the user may or may not have a specific use in mind when library material is borrowed. When library users borrow books or journals, they may have some specific in-
structional or research use for the material or they may borrow for background or recreational reading. In addition, library user surveys are expensive and time consuming for both staff and users.

Universities that have large amounts of sponsored research generally use crude techniques for allocating library costs associated with research. One method is based on faculty salaries adjusted by faculty activity analysis. Unfortunately, the method does not produce an accurate measure of the proportion of library resources being spent to support research programs. The method carries the disadvantages of the salary-based technique compounded by the inaccuracies in faculty activity analysis.

**Purdue Study**

During the course of the 1974-75 Purdue study, the allocation methods described above were discussed by the study team, librarians, and university administrators. The conclusion was that while the actual use method was most suited to the university’s needs, a comparison of results obtained by the four methods would be useful. There was also extensive discussion of appropriate allocation techniques for research and instruction. The study team was unable to devise a satisfactory method for dividing costs between research and instruction; therefore, total costs were allocated without regard to the end uses of library resources.

The Purdue Libraries consist of a central processing department and twenty-four departmental libraries. The intended use computation is based on the costs of purchasing materials and the cost of operating service facilities intended to be used by a department or group of departments. The purchase of library materials at Purdue is controlled through fund numbers assigned to each teaching department. Purchase data were summarized for the fiscal year 1975 for each fund number. The average cost of processing materials was added to the purchase price to produce a total cost of materials for each department. The cost of operating the Physics Library was attributed wholly to the School of Science in the computation of intended use distribution.

The actual use distribution consisted of ascertaining the total cost of operating the libraries and actual usage of materials by user group. The cost of operating the libraries was derived from fiscal and budget documents and included salaries and wages, fringe benefits, space and utilities, equipment, computer expense, and administrative, supplies, and miscellaneous expenses. Data on the identification of users of the libraries were not readily available; therefore, a survey of recorded circulation was undertaken in the twenty-four libraries. The survey was conducted during the three busiest months of the year, February 1 through April 30, 1975. The results of the survey provided the data needed to allocate costs on the basis of usage.

**Results**

Table 1 shows the allocation of library costs to major user groups with comparative data from the 1961 Purdue study and two Stanford studies.

The differences between Purdue and Stanford allocations are based, in part, on differences in relative enrollment and cost components. The higher percentages in the category of “other” for Purdue reflect the inclusion of staff in that group and greater use of the libraries by the public.

Table 2 summarizes the distribution of costs to teaching departments obtained through the application of four allocation methods. The differences between faculty FTE and faculty salary distribution generally are small. The greatest difference occurs in engineering where the faculty salary distribution is
TABLE 1
Distribution of Costs to Major Groups

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Undergraduates</td>
<td>40.8</td>
<td>15.4</td>
<td>24.6</td>
<td>43.9</td>
</tr>
<tr>
<td>Graduate Students</td>
<td>36.0</td>
<td>43.7</td>
<td>37.4</td>
<td>36.7</td>
</tr>
<tr>
<td>Faculty†</td>
<td>15.7</td>
<td>36.4</td>
<td>33.8</td>
<td>9.5</td>
</tr>
<tr>
<td>Other</td>
<td>7.5</td>
<td>4.5</td>
<td>4.2</td>
<td>9.9</td>
</tr>
</tbody>
</table>

* Distribution of usage.
† Stanford data include staff. Purdue staff included in other.

2.3 percent greater than the faculty FTE distribution.

More significant differences occur in the comparison of cost distribution between teaching faculty salaries and intended use. The intended use method indicates that the School of Humanities, Social Science, and Education share of cost is 41.4 percent, compared with 24 percent using the method based on teaching faculty salaries. The share of the School of Agriculture indicates a 9.5 percent difference, and Engineering shows an 8.8 percent difference when faculty salaries and intended use are compared. The distribution of faculty salaries is a function of both the number and average salary of faculty members in the various schools. The average salary of teaching faculty in humanities, social science, and education is lower than the average salary in agriculture or engineering; however, the proportion of library materials and facilities that are provided for humanities, social science, and education are far greater than those provided for agriculture or engineering.

The differences between the distributions based on intended use and actual use are generally smaller than the differences between faculty salaries and intended use. The greatest difference occurs in home economics in which intended use produces 1.9 percent share of costs and actual use indicates 8.9 percent. This difference reflects the smaller share of library budget that is allocated to the home economics library and materials and the diversity and interdisciplinary nature of the school's programs. The library materials needed by stu-

TABLE 2
Purdue University Libraries and Audio-Visual Center
Distribution of Libraries' Cost by School, 1974–1975

<table>
<thead>
<tr>
<th>School</th>
<th>Teaching Faculty FTE</th>
<th>Percent of Libraries' Cost Allocated by</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Teaching Faculty Salaries</td>
</tr>
<tr>
<td>Agriculture</td>
<td>17.5</td>
<td>16.4</td>
</tr>
<tr>
<td>Engineering</td>
<td>17.1</td>
<td>19.4</td>
</tr>
<tr>
<td>Home Economics</td>
<td>3.1</td>
<td>2.7</td>
</tr>
<tr>
<td>Humanities, Social Science, &amp; Education</td>
<td>25.1</td>
<td>24.0</td>
</tr>
<tr>
<td>Management</td>
<td>3.7</td>
<td>4.3</td>
</tr>
<tr>
<td>Pharmacy</td>
<td>3.8</td>
<td>3.6</td>
</tr>
<tr>
<td>Science</td>
<td>20.8</td>
<td>22.0</td>
</tr>
<tr>
<td>Technology</td>
<td>5.5</td>
<td>4.2</td>
</tr>
<tr>
<td>Veterinary Medicine</td>
<td>3.4</td>
<td>3.4</td>
</tr>
<tr>
<td>TOTAL</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>
dents and faculty in home economics are found in a variety of disciplines, including agriculture, creative arts, education, and management.

**CONCLUSION**

The choice of a library cost allocation method will depend primarily on four factors: (1) the size of the library budget relative to the university's total budget, (2) diversity of instructional programs, (3) availability of data, and (4) philosophy of university management.

In small colleges where educational programs are limited, allocations on the basis of faculty salaries or FTE's may be satisfactory. These allocations methods also would be acceptable in cases where the library budget is relatively small or management is willing to have some instructional programs subsidize others.

In universities that offer a greater number and diversity of instructional programs and engage in sponsored research, usage-based allocation methods will give a more accurate accounting for the allocation of library costs. While the actual usage methodology is preferred, it may not be possible to implement because of the lack of usage data and the difficulty of data collection. When usage data are not available, intended use will give a reasonably reliable estimate.

**REFERENCES**

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To the Editor:

Several articles have appeared recently on the careers of directors of libraries (see McAnally and Downs in C&RL of March 1973, Cohn in C&RL of March 1976, and Parsons in Wilson Library Bulletin of April 1976). In this connection, the statistics that follow should shed additional light on the subject of early withdrawal from administration.

Shown below are percentages relating to four groups of directors who withdrew from administration prior to age sixty-five (most universities require retirement at this age). For example, of those directors in office in 1956, 31.5 percent had in the period 1956-72 left administration prior to age sixty-five. The directors studied were those who were responsible for academic libraries within the Association of Research Libraries (ARL).

<table>
<thead>
<tr>
<th>Period</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1926-42</td>
<td>10-20 percent</td>
</tr>
<tr>
<td>1956-72</td>
<td>31.5 percent</td>
</tr>
<tr>
<td>1956-63</td>
<td>21 percent</td>
</tr>
<tr>
<td>1968-75</td>
<td>26 percent</td>
</tr>
</tbody>
</table>

Looking first at the two shorter periods, it should be noted that the increase in the percentage of those leaving early in the period 1968-75 probably reflects the decline in fiscal support that began to be felt in 1967. Still other reasons can be adduced, but some of the more serious ones, such as computerization, were felt in the period 1956-63 as well. Furthermore, in both periods directors sometimes withdrew early for reasons having little or nothing to do with administrative tensions.

As of 1956 there were thirty-eight academic libraries in the ARL. With respect to the directors of these, by 1972 twelve of these had left administration prior to age sixty-five; another twelve were still in office in 1972; and fourteen had dropped out at age sixty-five or older. The twelve still in office in 1972 comprised a durable cohort: five had served between eighteen and twenty years, another five between twenty-one and twenty-eight years, while two had been in office for thirty-five years. These figures relate only to the years served as director.

Even among those who left prior to age sixty-five in the period 1956-72 (it was in 1972 that McAnally was gathering his evidence), several directors had served long periods: five had been directors for fourteen to nineteen years, and three between twenty-two and twenty-five years. The remaining four were less durable, having served ten or fewer years; all four of these dropped out prior to 1967.

In the years before 1945, pressures were less intense than in the postwar years (absent were computerization, area studies, and the demands for greater productivity). Besides, the work ethic was still widely respected, and few gave serious thought to early retirement. Thus it should come as no surprise that the percentage dropping out prior to age sixty-five would be smaller than in the later period. Though the precise figure is somewhat in doubt, it is clear that no fewer than 10 percent and no more than 20 percent were involved, with the latter figure being the more probable one. To some persons 20 percent may appear to be surprisingly large for these earlier years, but the explanation seems obvious: administrative pressures are not the only clue to early departure from administration.—Louis Kaplan, Professor Emeritus, The University of Wisconsin-Madison.

ARL Statistics

To the Editor:

The ARL Office is currently gathering the statistics from our member institutions for our two statistical reports,* so some of the problems noted by Mr. Piternick (C&RL, Sept. 1977) are very much on our minds.


/ 521
Immediately after the publication of the ARL Statistics 1975-76, a statement echoing the concerns expressed by Mr. Piternick was issued from this office regarding the comments in the introduction to the published survey. These comments analyzed the ability of ARL libraries to develop their resources and services. In pointing out the problems with the analysis, we included a table that indicated the change in ARL university members since 1968-69. For those readers interested in performing additional analysis using ARL data, Table 1 below reflects changes in the ARL membership in the past eight years.

**TABLE 1**

**Association of Research Libraries Membership**

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Members</th>
<th>Institutions Added</th>
</tr>
</thead>
<tbody>
<tr>
<td>1968-69</td>
<td>76</td>
<td></td>
</tr>
<tr>
<td>1969-70</td>
<td>76</td>
<td></td>
</tr>
<tr>
<td>1970-71</td>
<td>78</td>
<td>Howard; Rice</td>
</tr>
<tr>
<td>1971-72</td>
<td>78</td>
<td>Arizona State; Calif.; San Diego; Calif.; Santa Barbara</td>
</tr>
<tr>
<td>1972-73</td>
<td>81</td>
<td>Brigham Young; Kent State (St. Louis dropped membership)</td>
</tr>
<tr>
<td>1973-74</td>
<td>82</td>
<td>Colorado State; Emory; Houston; South Carolina; SUNY Albany; SUNY Stony Brook</td>
</tr>
<tr>
<td>1974-75</td>
<td>88</td>
<td>Hawaii; McMaster; Miami; Queen's VPI; Western Ontario</td>
</tr>
<tr>
<td>1975-76</td>
<td>94</td>
<td></td>
</tr>
</tbody>
</table>

In terms of Mr. Piternick’s other comments, while we would reinforce his concerns that those using the data need to understand their limitations, at the same time we would emphasize more strongly the potential usefulness of the data for analyzing the nature and conditions of the nation’s great research libraries. One need only refer to the significant study by William Baumol and Matityahu Marcus, Economics of Academic Libraries (Washington, D.C.: American Council on Education, 1976), to appreciate the important insights that can be achieved by a thoughtful and intelligent use of statistical data such as those published by ARL.

The ARL Committee on Statistics is currently investigating other methods of gathering and analyzing ARL data, including adapting some of the statistical models used by Baumol and Marcus. We hope to issue a special report on this later this year.—Suzanne O. Frankie, Associate Executive Director, Association of Research Libraries, Washington, D.C.

**Response**

To the Editor:

I think only a few points need be made in response to ARL’s comments:

1. The “statement echoing the concerns . . .” referred to was not known to me at the time the article was written. ARL has kindly provided me with a copy—it does little more in this connection than call attention to changes in ARL membership made during the last decade and hence applies to only one of the many criticisms made by me.

2. ARL statistics do indeed constitute an important body of data and have been used, as I mentioned, in a number of significant studies among which, of course, that of Baumol and Marcus belongs. It is inevitable and desirable that they be so used, and thus that their quality be as high as is achievable. I have not advocated discontinuing the publication of ARL Statistics, only that they be improved.

3. What I am advocating is simply that ARL recognize and call attention to the obvious limitations in the accuracy and comparability of their data in the publication of the figures and in treatment of them in making comparisons and in drawing conclusions. In most cases this means a reduction in the number of significant figures used in the publication of data, the avoidance of rank-orders assigned on the basis of insignificant differences, and the use of more appropriate analytical methods in drawing conclusions as to institutional differences and common trends.

4. It is gratifying to learn that ARL is currently investigating alternative methods of gathering and analyzing statistical data. —George Piternick, Professor, School of Librarianship, University of British Columbia, Vancouver.
The Atkinson Report

To the Editor:

I read with considerable interest Mr. De Gennaro's review of Capital Provision for University Libraries: Report of a Working Party [the Atkinson Report] (C&RL, July 1977). There has been considerable discussion about this document in Australia, primarily due to attempts by a number of university administrators to apply the conclusions of the document in the Australian environment.

I draw the attention of your readers to several articles by Mr. Harrison Bryan, university librarian, University of Sydney, on this particular report. These have appeared in the Australian Library Journal and in Australian Academic and Research Libraries. He has done a detailed analysis in relation to applying the recommendations of the report both to British libraries and to Australian libraries.

I think that it is essential that American librarians not only be aware of this report and its implications but of reasoned arguments in relation to these views. The measures involved in this document ignore many important aspects of colleges and university libraries. It is an attempt to develop standards based on student numbers ignoring the requirements for breadth of teaching and level of courses. These are essential elements in considering university library provision.—M. Jacob, Director, User Services Division, Ohio College Library Center, Columbus, Ohio.

Collection Development

To the Editor:

As a fellow bibliometrician, I would like to add a few comments to Jim Baughman's article in the May 1977 issue of C&RL as implementation tips for collection development librarians inclined to try the techniques recommended.

Data quality control, specifically the initial choice of the bibliography used in the study, is of paramount importance. The scope of the indexing or abstracting service in terms of periodicals covered and of indexing policy determines how the literature is defined. Next, inclusion or exclusion of specific data in the analysis may affect the results. For example, Baughman selected entries under 309 subject headings, that is 6 percent of the total of 4,995 subject headings, for the purpose of investigating 'macro relationships.' While his rationale appears sound, can it not be the case that journal articles on specific topics representing the less 'productive subject' areas (operationally defined as entries under subject headings with less than eleven entries) are indeed the literature of new, often interdisciplinary fields of inquiry, which become linking agents between disciplines?

Data processing techniques to implement Goffman's indirect method (a general method, and not a technique by itself) may include clustering techniques, often available as canned programs in libraries of local computer centers. Consultation with computer scientists or computing consultants on campus may be fruitful to select a technique, which preserves the properties needed for finding relationships between data units, as recommended by Jardine. The canned program selected may add refinements in arithmetics, a detail important from an engineering standpoint but not elaborated in Goffman's general formula for establishing communication.

In case widespread interest manifests itself among working librarians in bibliometric experiments, a formal study and discussion group within ACRL with liaison to the special interest group (SIG) on Theoretical Foundations of Information Science of the American Society for Information Science should be established. Thus we may organize to cope with a micro-problem in the interdisciplinary macro-ocean.—Susan V. Emerson, Visiting Assistant Professor, School of Librarianship and the Library, University of Oregon.

REFERENCE


To the Editor:

James C. Baughman's comments on citation patterns in the May 1977 C&RL require some modification. What he identifies as a "serial" apparently excludes most monographic series, since the latter are rarely identified in the footnotes of scholarly journals. For example, in the articles of the
1974 issues of the *American Historical Review*, about 11 percent of the monographs cited turned out to be in either a traced or numbered series (excluding publishers' trade series). Further, if one limits one's consideration to the post-1955 monographic citations (which will account for the bulk of today's acquisitions), almost 15 percent are from a monographic series. Thus, adding monographs in series to periodicals and other identifiable serials gives a total of more than 30 percent, which is substantially larger than the 23 percent reported on page 246 of Baughman's article. The latter, however, is a more useful figure (when qualified), since a monographic series can be acquired as individual volumes.—*Joseph J. Lauer, History Librarian, SUNY at Buffalo Libraries.*

**Response**

To the Editor:

It is with gratitude that I acknowledge the letters submitted by Professor Emerson and Mr. Lauer. Their comments display interest and insight.

In response to Professor Emerson's letter, I enthusiastically concur with her call for the creation of a discussion group within ACRL with liaison to the special interest group within ASIS. Currently, *Library Literature* does not list the term “collection development” as an independent subject heading. Realizing that collection development is a major problem, one that will become more acute as our body of literature increases disproportionately to fiscal abundance, the profession should engage in a more serious determined effort toward problem solution in this area. While the ALA *Handbook* does not list a collection development committee within ACRL, such a committee could serve many useful purposes, including stimulating research in the structuralist and other approaches, coordinating activities, providing leadership, and promulgating policy guidelines based upon systematic knowledge. Hopefully, ACRL will assume a leadership role in this important, emerging aspect of library management.

Professor Emerson's cautionary statement concerning general methods, and algorithms to implement these methods, should be carefully considered by investigators to insure the integrity of their future studies involving clustering methods. As Dr. Emerson implies, there are constraints in any study; in this instance the *Social Sciences Index* (SSI) is the major constraint. The 309 subject headings contain 36 percent of the entries from SSI (Volume 1, 1974-75). The decision to use 309 subject headings was based on the notion of high frequency and low frequency; i.e., subject headings with eleven or more entries were determined to be high frequency (more productive) subject areas. The rationale for using the high frequency subject areas is based on the hypothesis that the more productive subject areas would reveal the current state of affairs in subject relationships, hence, current established interdisciplinary relationships.

Dr. Emerson's question, asking if “the less 'productive subject' areas . . . are indeed the literature of new, often interdisciplinary fields of inquiry” and may “become linking agents between disciplines” not only represents an important problem in the growth of subject literatures but also suggests a relevant hypothesis that needs further investigation in the social science literature. In short, journal literature *per se* is a relevant topic for productive research.

With respect to Mr. Lauer's letter, I am grateful for his clarification of the term “serial” and heartily concur with his statement that "the latter [the 23 percent figure] . . . is a more useful figure (when qualified), since a monographic series can be acquired as individual volumes."

It is my hope that others will realize that the structuralist approach, with its orientation toward discovering underlying relationships, is a valid and important method leading to systematically based collection development.—*James C. Baughman, Associate Professor, School of Library Science, Simmons College, Boston, Massachusetts.*

**Editor's Note:** The Resources Section of the *Resources and Technical Services Division* includes a Collection Development Committee (which has as one of its functions the development of "guidelines for the formulation of selection parameters") and two discussion groups for chief collection development officers, one for large research libraries and a second for medium-sized research libraries.
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Gordon Greenwood has headed the Department of History at the University of Queensland since 1949. A distinguished historian with an international reputation, he is long time Chairman of the Library Committee of his university and Foundation Chairman of the Commission on Advanced Education.

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BOOK REVIEWS


"The purpose of this study is to report on the viability of the journals' system for communicating scholarly and research information." This direct statement, the first sentence in the authors' introduction, is an eyecatcher. One immediately expects, particularly from the phrase "viability for communicating information," a thorough, penetrating analysis and appraisal of the journals' success, failure, past, and future from sociological, psychological, political, and economic points of view. Such a study could have enormous ramifications. But the authors soon make it clear that their study is solely economic. Their specific objectives were:

1. The gathering of data in the principal areas of economic interaction between
publishers and producers and libraries as customers for scholarly and research journals.

2. The development of these data into proposed joint actions by publishers and research libraries aimed at achieving cooperative and reasonable results agreeable to both communities.

Every librarian is familiar with the economic trend of journal prices, and nearly everyone would like to know the ultimate effects of this trend. The questions of interest to the reviewer, then, are (1) whether the authors have accomplished their objectives and (2) whether the information they have given us is useful.

The economic trend itself needs no additional documentation. Ample statistics are available elsewhere. The authors were much more interested, as we are, in documentation of the effects—such things as re-allocation of book funds to journals, the cancellation or decrease of subscriptions, alternatives to subscriptions, such as network dependency, and actions taken by publishers to increase revenues and reduce costs.

The research methodology was a survey of journal publishers and academic, public, and special libraries for 1969, 1971, and 1973. The authors took great pains to assure that the libraries and publishers were randomly selected from various strata of size and type. Yet, as in so many statistical studies, the unit of analysis (i.e., the unit about which inferences are made) was never specified. If libraries were the population sampled, libraries would be the unit of analysis, as indeed they were in some tables. Journals, however, are also the population of concern and, therefore, should be the unit of analysis, as indeed they were in some tables. Confusion arises, however, because in some cases the unit actually analyzed was other than libraries and journals, e.g., the year, library size, or discipline.

The authors also wanted their sample size to be large enough to assure statistical confidence. But they performed no statistical tests, though they assiduously report their n’s for means and percentages, their principal analytical statistics. These statistics cry out for some kind of significance test. Analysis of variance or, at the very least, cross-tabulations with chi-square would have been appropriate. Their conclusions will stand or fall, therefore, on the reporting of means and percentages.

Readers will want to evaluate conclusions for themselves. Some examples are:

1. Publishers’ need to secure revenues from libraries is not matched by libraries’ ability to supply those revenues.

2. Economic problems of journals and libraries are not caused by wild and uncontrolled increases in the publication of new journals.

3. There is no strong evidence that a price increase of a journal is a factor in its cancellation, but the increase may result in cancellation of some other journals.

4. In a laissez-faire system, where journals survive or perish on decisions of the marketplace, university presses and others not for profit would be hardest hit. Moreover, entire subject disciplines, such as the humanities, would not retain their viability.

5. The price-budget imbalance is not brought about by excessive or substantial profitability by publishers.

6. The situation for university presses is disastrous.

7. There is clear evidence of increased activity in networking, cooperative acquisitions, and interlibrary lending and that these activities affect purchasing decisions and, therefore, publishers; but there is no evidence that lending causes cancellations.

8. There is wholesale reallocation of budgets from books to periodicals.

9. Cost savings from cooperative cataloging is being diverted to acquisitions.

10. Advertising, page charges, and subsidies are decreasing; therefore, publishers must raise subscription prices.

11. Repackaging of publications in monographic format had the greatest level of response, particularly from commercial publishers.

12. Little economic impact of alternative publication formats, such as microforms, can be ascertained.

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The authors include an impressive list of project contributors: an advisory committee, consultants, and panel of reactors, imparting the impression of credibility and authority. An interesting table on alternative methods for disseminating scientific articles was authored by Joseph Becker.

The reviewer does not wish to demean the importance of this book on the basis of its methodological limitations. It is the first of its kind on a serious economic problem. Its conclusions, whether methodologically justified or not, are intelligently drawn with considerable insight and provide us with much to ponder. It is a useful book.

William E. McGrath, Director of Libraries, University of Southwestern Louisiana, Lafayette.


This is a landmark document in the nation's evolution to a post-industrial society. This report is the product of a committee charged by former president Gerald Ford in March 1976 to review and define information policy issues, to determine the status of various information policy studies underway in executive branch agencies, and to report on how the federal government should organize itself to deal with information policy issues. The major recommendations of the committee were: that there
should be as a national goal the development of a coordinated National Information Policy; that there should be in the Executive Office of the President an Office of Information Policy (either by creating a new entity or by refocusing and/or restructuring one or more existing entities); that there should be created an interagency Council on Information Policy chaired by the director of the Office of Information Policy; that the Office of Information Policy should be assisted by a representative advisory committee.

The Committee on the Right of Privacy began its study taking a narrow view of information (i.e., data about individuals collected and maintained by federal agencies). It became evident early on that this view was inadequate, so a meeting was arranged by the National Commission on Libraries and Information Science (NCLIS) in July 1976 between members of the committee and representatives of various types of libraries and information services and public and private agencies.

Given its charge and the deadline of September 1976, it is clear that the committee could have done little more than catalog the issues. This it has done with admirable clarity, arranging fifteen issues into five clusters: government information; information in commerce; interaction between technology and government; international implications; preparing for the information age.

As we move toward the White House Conference, our mails will bring and our desks will be covered by an unequaled avalanche of "Reports from Washington," brought to us with the compliments of NCLIS. This document will not win a writing award, but we will see none in the avalanche of more importance.—C. James Schmidt, Director of Libraries, State University of New York at Albany.


Louis Booker Wright is one of the few remaining eminent research scholar-librarians in the tradition of Reuben Gold Thwaites. Research associate virtually in charge of the Huntington Library for sixteen years and director of the Folger Library for twenty, he was connected with a galaxy of intellectual enterprises, organizations, and institutions. For these activities he has been heaped with honors, including twenty-eight honorary doctorates. This is the second brief autobiographical book he has written since 1974.

Wright's accounts of the conversion of both the Huntington and the Folger, preeminent among our private research libraries, are of considerable interest, since he participated in both developments almost from the beginning. To convert even a great private library to research strength requires a great deal of thought and effort. When Indiana University was given the Lilly Library, Cecil Byrd (one of the finest bookmen in this profession) observed to me that to fill in the gaps between the great books and solidify it into a research collection would take about thirty years. Indiana is still working on that very process.

At the Huntington, Wright took a strictly pragmatic approach, including the acquisition of microfilm, to solidify the fields of strength in Huntington's collection and acquire the ordinary books and reference books necessary to allow academic scholars to work fruitfully with the original collection. Converting Huntington's original staff, infused with the collector's attitudes and values, to an outgoing, service-minded library staff, equipped to cope with the sometimes brutally utilitarian, self-centered demands of university scholars, was even more difficult.

When he came to the Folger in 1948, it was in disrepute, disrepair, and disarray, with service denied to many qualified scholars, books biblio-piled but not cataloged, and guards over the collection wearing guns. The same process used at the Huntington was applied to the Folger with success. The emergence of both libraries into the intellectual world was greatly facilitated by programs of permanent research scholars and rotating research fellowships to encourage the development and use of the library. Wright correctly states that the importance of private research libraries will loom more important as the strength of the university research libraries dwindles. Indeed, in the 1980s, we all may tend to revert to the conditions of the Folger when Wright took it over—collections unsolidi-
fied, books uncataloged, guards with guns.

The book contains a range of other interests—sketches of Sir Thomas Bodley and Henry Clay Folger (though not of Huntington), experiences in the British Museum Library and the Bodleian in 1930, and reminiscences of a far more relaxed academic world. The director of the Huntington, in the 1930s, spent every summer at Bar Harbor.

Of the two accounts, that of the Huntington shows a certain amount of feeling, whereas that of the Folger is rather flat and mechanical. Wright's heart remained behind in southern California where he had been most happy. As autobiographical writing, Wright's style, which holds his material at arm's length from himself, is unfortunate. His writing does not involve him as a person, and it does not reflect the qualities and mind of a remarkable person. Consequently, although his material has a range of interest for anyone interested in libraries and scholarship, its presentation is not very exciting.—Ellsworth Mason, Head, Special Collections Department, University of Colorado, Boulder.


Abstracting and indexing services are virtually essential for gaining access to information contained in an ever-increasing volume of journals. It is hardly necessary to point out that, as the body of scientific literature has grown, problems in reaching information in this literature have intensified. The authors state in their introduction: "If each A & I service must scan a constantly growing number of journals, including many which are interdisciplinary in scope,
it is logical to assume that many A & I services must cover the same journals." The authors question the degree of journal overlap between services but more importantly seek to establish the extent of journal article overlap. Thus their definition of overlap as a two-level concept: journal and journal article.

This report is exactly what its title purports it to be. The journal and journal article overlap among the chosen fourteen abstracting and indexing services are studied and reported in minute detail.


Journal literature published in 1973 covered by at least one of the fourteen services constitutes the population for the study.

A painstaking and ponderous description of the progression of the study leads the reader through the mathematics and statistical methods employed. The tables are excellent and profuse with, in most cases, commendable explanations. The study reveals that of the approximately 26,000 journals scanned by the services, 5,466 of them had articles included in at least two services. This figure reflects journal overlap; the individual articles are not necessarily covered by more than one service. Statistical treatment of the massive study data allowed the authors to estimate a 23.4 percent maximum article overlap for the 5,466 journals.

This project, which was supported by the National Science Foundation, Division of Information Contract C875, was completed within the short period of eighteen months. Therein may lie the reason for some of the errors which mar the report. More careful editing perhaps would have eliminated the profusion of typefaces encountered and straightened out the mix-up in page numbers early in the report. An exception to the commendable explanations of tables is that given for Table 8, "Article Overlap—Services Perspective." The description, far from explaining the table, renders it unintelligible.

The appendix contains some of the most interesting information found in the report, namely the comparison of the fourteen services by the methods of factor analysis and multidimensional scaling (MDS). Clusters of services in the graphical form, resulting from multidimensional scaling, clearly reveal similarities of coverage.

The study makes no qualitative judgment of overlap. The data are provided, figures for maximum possible article overlap and estimates of actual overlap are given, and the conclusion "overlap is considerably less extensive than was estimated by the researchers before the study" is drawn. This information will probably be most useful to the services included in the study. The practical application for academic librarians is not readily apparent.—Dolores B. Owen, Documents Librarian, University of Southwestern Louisiana Libraries, Lafayette.


ment,” by Velma Veneziano and James S. Aagaard; and “The Economics of Computer Output Media,” by S. Michael Malinconico.

All of the papers are well written and supported with details, both technical and cost related to the topics that the authors are addressing, with the exception of Kilgour’s, which is really an introductory or keynote paper meant to set the scene for the following presentations. In this reviewer’s opinion Ross’ paper, based on the experiences at Cornell University, is one of the best specific case examples to be found in the literature addressing this topic. His statement that “bigger and better computers do not mean lower production costs” not only is presently true but increasingly will be the case as improved-performance, lower cost hardware/software systems become more prevalent. Thorson’s paper on costs and experiences at Ohio State University shows that circulation automation, while an expensive undertaking in development, conversion, and operation, has considerable service benefits which offset these costs.

The papers by Freedman, Gorman, and Malinconico, all of whom address aspects of catalog production, give an excellent overview of the complexities of the decision process involved in this highly technical aspect of library operation.

With the current trend toward development of network services and their integration into library operations in a cost effective manner, it is refreshing to have Veneziano and Aagaard chronicle their experiences developing the in-house online system at Northwestern University. Their work shows that with a properly managed effort and rather modest in-house funding sophisticated online systems can be operated as well as developed by a large library.

Editorial quality of the volume is excellent. If one deficiency could be noted, it is purely on the point of the appropriateness to the topic of the paper by Folk. Certainly, a paper on the impact of computers on the publishing enterprise is of interest to librarians and can serve as an example from a sister field but is not purely within the context of the economics of library automation which deals with library internal operations largely. However, Folk’s paper is an excellent overview from the publisher’s viewpoint, and as such it is a valuable addition to the volume, aesthetic judgments being laid aside in favor of technical substance.

Those who have acquired past volumes in this series also should acquire this one. Libraries and individuals building collections in the library automation or the cost/benefits of information systems will derive more benefit from this slim, well-designed collection of papers than the modest price expended in its acquisition.—Audrey N. Grosch, University of Minnesota Libraries.


As the assistant keeper of fifteenth-century printed books at the British Library for twenty years, the author of this book is well prepared to “assess and correct our existing knowledge of Caxton’s life and work.” In fact, Painter presents the most thorough published reassessment of the historical record since Blades’ biography of exactly one
century ago. In doing so, he unstintingly corrects not only Blades but also Duff, Crotch, and such recent authorities as N. F. Blake.

For example, in an earlier review in this journal of Blake’s *Caxton*, this reviewer mentioned that Blake maintained that Caxton was born at Strood. Painter, however, suggests that Tenterden, “a weaving town in the heart of the Kentish Weald, with a Causton Wood near by, [also] would fit his own statement perfectly, and it would not be surprising if the elder Thomas Caxton of Tenterden was his father, and the younger one his brother.” In similar fashion, Painter challenges traditional beliefs in light of new or previously ignored evidence regarding the rest of Caxton’s family, apprenticeship, and early merchant years.

In staying close to his sources, Painter’s perspective necessarily presents Caxton as a political man of some savvy, first as a Yorkist and in his later years as a Tudor. Caxton’s anti-Lancastrian views are well developed in the chapters on Caxton as Governor, Diplomat, and in Exile. “The events, persons, and movements of contemporary history in which Caxton was so intimately involved” are the backdrop for Painter’s drama.

Painter sets the stage for Caxton’s printing career by cogently arguing that Caxton’s master during his stay in Cologne was The Printer of *Flores sancti Augustini*, who may have been Johann Veldener. Almost certainly Veldener was the long-time supplier of Caxton’s type. With this scenario, Colard Mansion’s role is relegated to the “interchange of ideas and ambitions.” In later chapters, Caxton comes across as a humorous and witty human being and as a highly productive translator shaping our English language. Painter also suggests that Caxton’s printer’s device provides a “clue to the chronological labyrinth of his last years.” For the first time, evidently, a bibliographer examines the device not for what it means but for what it reveals as a bibliographic signpost. Painter discerns six states of the device and thereby reorders the popularly received chronology of Caxton’s canon.

Physically this book is similar to Blake’s book—nearly a companion volume. In several ways, moreover, the Painter work is...
both its compliment and its complement. Besides the scholarly apparatus of footnotes, illustration notes, select bibliography, and references, there is a “chronological list of Caxton’s editions . . . in accordance with the evidence and arguments brought forward in this book.”

We have the organizers of the Caxton Quincentenary to thank for focusing scholarly attention on Caxton and for stimulating such a lively and scholarly interchange on “one of the most famous yet least known of great Englishmen.”—John V. Richardson, Jr., Graduate Library School, Indiana University.


Since the end of World War II there has been a steady growth of interest in Japan, and the Western scholars have written on virtually every aspect of the Japanese society. Yet until now, no one has attempted to take a comprehensive look at the Japanese libraries. *Toshokan* by Theodore F. Welch is an excellent and well-researched compendium of the library world in Japan.

For every kind of library, the author traces its history and legal background and describes the present activities, providing an impressive array of statistics and other documentations. In twelve chapters he manages to provide rather penetrating descriptions of various libraries and the status of their librarians. The modern library concepts were transplanted in Japan by the Americans who brought many changes to Japan during the postwar occupation. In the past thirty years many of the Western ideas imposed on Japan have taken deep roots in the cultural milieu of the Japanese people, but the library has not found a significant place in the mainstream of Japanese life.

What emerges from Welch’s descriptions...
is an image that this sophisticated society with a highly educated and literate population has not developed an appreciation for the library and librarians. For most of their information needs, the people bypass the librarians and even the library itself. Only in the science-technology fields, some systematic services have been developed successfully. The overall quality of his information is excellent if one keeps in mind the fact that six to ten years have elapsed since he has gathered them, and some things have changed for the better. There are, however, a few questionable matters serious enough to be mentioned.

First, Welch states that the University of Tokyo has revived its library science program and that it already has awarded doctoral degrees in librarianship. To date, this university has not produced any graduates with degrees in librarianship, not even with a B.A. In the National University system, there is no program which offers a degree in librarianship, not even with a B.A. In the National University system, there is no program which offers a degree in librarianship. The Toshokan Tandai (the National Junior College of Library Science which offers two-year certificates) will be graded up to a four-year college in a few years when the college moves to a new site outside of Tokyo. The only Ph.D. program in library science in Japan began in 1975 at the Library School of Keio University, and none of its four candidates has received the degree as of April 1977, its second anniversary.

Again, Welch mentions that there are more than 10,000 special clerks serving as school librarians and that they are paid a "mere 14 dollars a month." According to the Japanese Bureau of Statistics, the income of an average urban salaried family has tripled during the ten-year period from 1965–1975. It gives the monthly income of Y236,197 (about $840) for 1975. Even part-time student workers make $1.50 to $1.70 an hour in most places, including libraries. To suggest that any regular employee in Japanese libraries today earns a monthly salary of $14 is preposterous.

Those who are interested in comparative librarianship may find this book very stimulating, and others will find it to be a valuable handbook on Japanese libraries.—Eugene Carvalho, Librarian, East Asian Library, Kansas University Libraries, Lawrence.


This work is a synopsis of a study performed under the auspices of the Fédération Internationale de Documentation entitled Methods of Analysis and Evaluation of Information Needs to be Satisfied by National Documentation, Library and Archive Infrastructures. Although the frame of reference throughout the work is the design of national and international information systems, the discussion is equally relevant to smaller constructs, such as local or regional networks or even individual libraries/information centers.

The authors’ approach is conditioned by the basic assumption that “the effectiveness of such facilities depends upon the extent to which their system characteristics correspond with the situation of the user and on how much the potential user of these facilities is willing and able to make use of these services.” Although librarianship has, in recent years, tended to concentrate on its service aspects rather than its archival functions, the equation of user satisfaction—especially the satisfaction of the unsophisticated user—with library success by no means commands the universal agreement assumed here.

Nonetheless, users are obviously central to any information system so it is incumbent upon the designers and operators of such systems to know as much as possible about those they attempt to serve. Kunz and his colleagues identify, discuss, and analyze the traditional methodologies employed in user studies and conclude that for the most part they have “led only to an accumulation of previously known data and to a confirmation of already known relationships, and have not generated much new knowledge.” The need for more and better research about users and the phenomenon of use is clear, and the relatively untried but promising research strategies suggested by the authors to expand our knowledge of this area are worthy of further development.
Turning specifically to the design of information systems, the authors posit that traditional concepts of systems analysis have been inadequate to the task because information problems tend to be “Wicked Problems.” The properties associated with “Wicked Problems” include the following: there is no definitive solution to the problem; problem formulation is identical with problem solving; wicked problems have no stopping rule, for improvement is always possible; solutions cannot be categorized as right or wrong, but only as “good” or “bad” in varying degrees depending upon the viewpoint of the evaluator; and there is no right to be wrong. Opportunities for experimentation and trial and error solutions do not exist.

The authors describe a variety of methods and techniques to assist in the design of information systems which they call “systems research of the 2nd generation.” The methodology requires the joint participation of potential users as well as operators of the information system in all stages of design and implementation. The structured approach is an educational process and insures that competing demands (e.g., exhaustiveness vs. costs) are recognized and compromised in a rational fashion. As a theoretical model the technique unquestionably has great merit; but it demands a level of leisure, cooperation, and rationality seldom encountered in the real world. Still, information systems designers would be well advised to consider the well-documented failures of the traditional approaches before dismissing this procedure as too theoretical.—Robert L. Burr, Director, Crosby Library, Gonzaga University, Spokane, Washington.


In this volume, which originated in a series of lectures delivered at the University of Pennsylvania in the spring of 1971, E. G. Turner, professor of papyrology at the University of London, investigates the bibliographical form of the surviving codices from the ancient world. The codex form in manuscript made its first appearance in the second century A.D. when leaves on papyrus or vellum were first placed between two covers rather than in a roll. Turner confines his examination to this early period through the sixth century and traces the early stages of the development of the format of the book.

In this pioneering study, Professor Turner has examined more than 1,000 manuscripts and has formed a series of tables where similar manuscripts are grouped together based upon dimension, papyrus or vellum material, the format of the text, and paleographical evidence. He has examined the majority of the manuscript fragments personally and carefully gives sources for his information for the other manuscripts. The tables of series and groupings are distributed throughout the text. A full discussion of these manuscripts and a review of the literature concerning each one is included. The second half of this volume consists of a table of eighty-three pages. It is a consolidated list of the codices studied, giving in tabular form in columns the basic information about the codices cited in the text. Each is identified by a serial number that serves to lead the reader quickly from the text to the table when a manuscript is discussed. A list of monographs and journals consulted precedes the text.

Professor Turner, a distinguished papyrologist and paleographer, has published a number of monographs and articles on books in antiquity. In this volume he has carefully pieced together his evidence from the extant fragments to create hypotheses that can aid in dating early codices and in tracing their development in a coherent manner. Considering the fragmentary and fragile nature of these manuscripts scattered throughout the Western world, his undertaking has been considerable. His hypotheses, while by the very nature of the objects studied tentative, are built upon the evidence gathered and are indeed impressive. They shed much light on the format and development of the earliest books in codex form.

This book will no doubt be purchased by all research libraries for the use of their classical scholars, and one hopes that library schools as well will want this study in descriptive bibliography for it is a significant contribution to the literature on the
The Correspondence of the Three William Byrds of Westover, Virginia, 1648-1776
Edited By Marion Tinling
Virginia Historical Society Documents. 2 volumes, $32.50
This is the definitive edition of the correspondence of the first three generations of William Byrds. The lives of these men, reflected in the letters of each, span the colonial period from the beginning of westward expansion until the Revolution. All the letters are complete and accurate transcriptions from the original manuscripts. Marion Tinling includes many letters previously unknown and places in proper chronological order those that have appeared separately in journals. Historians will welcome, as well, the full genealogical details about the Byrd family, along with biographical information that corrects many of the traditional myths about the Byrds. Countless other persons and places are also identified.

A Pagan Prophet: William Morris
Charlotte Oberg
192 pp. (approx.), illus., index. $13.95
This sensitive and well-researched study argues convincingly that William Morris's narrative poetry and prose, rather than being escapist as they are usually described, represent his abiding conviction that art must be intrinsically related to life. Charlotte Oberg analyzes all the major works in the vast oeuvre of Morris. Her critical exploration reflects both firsthand manuscript study and a discussion of recent works in cultural anthropology and theories of myth.

Business Ethics Bibliography 1971-1975
Donald G. Jones
xx, 207 pp., index. ISBN 0-8139-0711-x. $18.95
This is a guide to studies published in the United States between 1971 and 1975, with selective annotation. The items cited cover the full range of subject matter, from personal integrity and the private ethics of executives to the wider, more complex issues of business and society relations. This bibliography is particularly valuable today because self-criticism, internal pressure to raise standards of conduct, and sensitivity to social responsibilities are increasingly becoming a part of today's business world. The book is a continuation of Daniel L. Gothe's A Selected Bibliography of Applied Ethics in the Professions, 1950-1970. (Virginia, $4.75)

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Librarians should not be deterred by the nondescript title, especially since so little scholarly research exists on the historical roots of the profession. The Oral Antecedents of Greek Librarianship seeks to fill a significant gap in the literature of librarianship. Wright attempts to deal with the antecedents of the Alexandrian library movement by focusing on the transition of classical civilization from an oral to a written tradition. Here, the author believes, can be found the origins of the library. This hypothesis is intriguing and entitles Wright to take his reader on a historical journey that recounts the function of information in classical society from preliterate times to classical Greece.

On the way, he introduces several unusual observations, some of which relate directly to his theme, others of which digress from it. One strong observation compares Homer to the librarian in terms of the information function of each within their societies—a unique argument that is well defended. Another observation of considerable merit details the heavy influence Oriental bibliographic methodology had on the Greeks. A third observation, however, involves Wright's defense of the "inventionist" against the "evolutionist" theory of writing. This one makes for a nice story, but hardly worth the lengthy effort in terms of his theme.

Of particular concern to this reviewer is Wright's heavy reliance on a few secondary sources, especially the works of S. H. Butcher, Rudolph Pfeiffer, and Chester C. Starr. It is obvious the author bought the ideas of all three, but his hopes that lengthy quotes from their works will serve to convince his own readers fall short of their mark. This is especially true for chapter Four, where Pfeiffer is referred to or quoted in nearly half the 246 footnotes.

The writing style is frequently burdensome (especially in chapter One, "The Metaphysics of Information"), and the organization occasionally loose. Shera's Foreword is good, but de Vleeschauwer's essay has already appeared in Toward a Theory of Librarianship: Papers in Honor of Jesse Hauk Shera, edited by Conrad Rawski (Metuchen, N.J.: Scarecrow, 1973). Taken together, the Foreword, Afterword, and text cover the subject; but a definitive study awaits the scholar who will put more stock in primary sources and be less influenced by second-party interpretations.—Wayne A. Wiegand, College of Library Science, University of Kentucky.


German librarianship, like its counterpart in the United States, has undergone a decade and a half of rapid growth and change. This handbook represents an attempt to inform German librarians and educators of new theory and practice, organizational reforms, and new technology in the library profession. In translation its title reads On the Theory and Practice of Modern Librarianship; and its three volumes treat social aspects, technological aspects, and administrative aspects.

The editors, exercising the principle of "limited variety," have compiled three volumes of essays on the state of the art—recent developments, current problems, and future trends in German librarianship and, where appropriate, have included information about librarianship in other countries as well.

Written by noted German librarians and educators, these essays provide a wealth of current information on such topics as public relations, research in library use, library instruction, professional image and education, electronic data processing developments, automation of technical processes, audiovisual media, library building planning, cost-effectiveness studies, management theory, personal leadership styles, and library statistics in German public and research libraries.

Though some unevenness of style and
quality is to be expected in a collection of this nature, the overall quality is impressively high. Many of the essays are bibliographic in nature, and most contain extensive bibliographies or lists for further reading. Bibliographies are comprehensive and current and, although they emphasize German scholarship, they are by no means limited to it. Outlines of topics to be covered at the beginning of each essay and the inclusion in each volume of a comprehensive subject index to all three volumes enhance the handbook’s value as a reference tool.

The editors note that library history and material on the history of the book and the art of printing have been excluded from these volumes because they are covered in other German reference tools.

A survey of English language literature published in the last decade on the theory and practice of librarianship produces no single reference source with the scope of this German handbook. Kent and Lancour’s Encyclopedia of Library and Information Science covers many of the same topics in its twenty volumes issued to date. Although it is comprehensive in coverage and international in scope and includes much historical material and emphasizes library education, it does not, however, provide the depth of coverage the handbook does on many topics. Frederick Kilgour’s brief article on the Ohio College Library Center in the Encyclopedia is little more than a publicity release that identifies the topic and relates its history. The handbook’s essay, by contrast, is packed with current statistics and information on costs, compares features of the OCLC system to BALLOTS and CAPTAIN, and describes several similar systems in operation in the U.S. and Germany. It also provides an extensive bibliography for further research.

The German handbook’s essay on library instruction draws on American models; although it does little more than summarize current thinking in German libraries on this important topic, I found this straightforward overview preferable to the article in the Encyclopedia, which is flawed with trendy social science jargon. Volume 2 of the handbook, on technological aspects of librarianship, can be most easily compared to the new edition of the Hayes and Becker Handbook of Data Processing for Libraries (reviewed in CG-RL 37:170-71 (March 1976)). Though the two reference tools differ in style and approach, they have similar purposes, address similar audiences, and cover much of the same material. A brief glance at the treatment of automated circulation systems in each tool will point up some essential differences, however. The Hayes and Becker Handbook provides detailed information in easily digested form. The text is replete with examples. Graphs, flowcharts, illustrations, and numerical tables supplement and highlight the written material. The German text is heavy sledding, and, although the theoretical information reflects current trends and problems, there are no charts or other concrete illustrations to break up page after page of dense print. Paragraphs are numbered and subnumbered, and all footnotes and bibliographic references are found at the end of the chapter. All of these features make it a less valuable reference source for the practitioner with limited time and a desire for graphic illustration of current practice.

Ralph Ellsworth’s excellent, though now dated, essay on library buildings in volume 3 of Shaw’s The State of the Library Art (1960) furnishes another point of comparison with Franz Kroller’s essay on library building planning in volume 2 of the handbook. Ellsworth’s article reflects the state of the art at the time it was written. It surveys and summarizes the literature on the topic and comments on the reliability of the data provided. It was intended as a planning guide and contains much empirical data to assist in planning new or remodeled facilities. Kroller’s essay emphasizes the theory of planning and provides an excellent view of the current literature of planning but provides no data or standard for the practitioner.

A wealth of information for the library educator or specialist in international librarianship is contained in Hans-Peter Geh’s essay on “Professional Image and Education” in volume 1 of the handbook. Geh offers a detailed outline of the professional levels for German librarians, the educational qualifications and practical experience necessary to achieve each level, and the career paths available for each. Choice of
curricula in library and information studies is tied closely to the professional level open to each student. A distinct graduate-level program in library and information science has only recently come into being at one or two German universities, but the long-range trend seems to be for its recognition as a distinct discipline of study, perhaps within the framework of communications research.

Perhaps the English language reference source that is most similar in purpose, format, and achievement to the German handbook is the excellent series *Advances in Librarianship*, edited by Melvin Voigt. The purpose of this series, like the handbook, is to present essays on current trends, which are timely and of interest to practitioners and educators in the field, and which reflect current research interests. Though its serial nature gives *Advances* opportunity for broader scope and permits topic specialization within an individual annual volume, many of the topics it addresses are also treated in the handbook. While the German source discusses cost-effectiveness studies and personal leadership styles, *Advances* focuses on productivity measures and the role of the middle manager in its most recent volume. The two tools complement one another nicely.

Kehr, Neubauer, and Stoltzenburg have provided a valuable sourcebook for German librarianship. They plan a future collection on the problems and trends in various types of libraries and library systems. May their plans come to fruition.

This handbook is recommended for large university and research collections and library science collections.—Meredith A. Butler, Head of Public Services, State University College, Brockport, New York.


Written acquisition policies are either assumed or enthusiastically supported in the literature of librarianship. "Library Acquisition Policies and Procedures" is designed to aid librarians, library school students, and publishers to understand some of the factors which underlie and influence library materials selection." It is also intended as a help to those who may be in the process of developing acquisition policies. It will best serve this latter purpose.

This book is primarily a collection of acquisition policy statements, with 372 pages devoted to reprinting, in full or in part, 82 policies from both public and academic libraries. Including the preface and introduction, there are almost 450 pages. A significant portion of the preliminary pages reports the findings of a survey that started with a letter to 3,600 libraries requesting their selection policies and willingness to complete a follow-up questionnaire. The response to the initial letter and the follow-up questionnaire was some 300 selection policies and 246 usable questionnaires. In addition seven ALA-approved statements about selection are conveniently reprinted in the appendices.

The most that can be said for the survey report on acquisition procedures is that it is interesting. For a questionnaire with only twelve questions it is difficult to imagine a greater incongruity in responses. Can we believe, for example, that one academic library spent 95 percent of its total library budget on library materials? Or that another spent only 3.9 percent? In addition, the editor draws attention to discrepancies between the policy statements received and the answers to questions in the survey. In the words of the editor, "The academic and public library questionnaire survey answers, although certainly not conclusive of any trends, do provide some interesting commentary on what happens in the practical world of library acquisitions."

It may be appropriate to comment on "acquisition policy" and "selection policy." Boyer and Eaton in *Book Selection Policies of American Libraries* (Austin, Texas: Armadillo Press, 1971) stress the distinction. Elizabeth Futas does not. If the distinction must be made, it would appear satisfactory to consider "selection policy" a vital section of any "acquisition policy."

The policies selected for reprinting are in three categories: public library policies, academic library policies, and partial library policies by category. The policies are representative of various types of libraries and are worthy examples. Twelve public library and fourteen academic library pol-
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icities are reprinted in full. Eighteen public library and thirty-eight academic library policies are reprinted in part. Those policies reprinted in part are arranged into several categories, e.g., selection, weeding, etc. Such an arrangement is very useful.

Similar information has been available previously. Carter, Bonk, and Magrill have included partial selection statements in Building Library Collections (4th ed.; Metuchen, N.J.: Scarecrow Press, 1974). The Boyer and Eaton compilation mentioned above has been quite useful to librarians and library educators since 1971. The ALA Headquarters Library has maintained a file of representative acquisition policies; and the Association of Research Libraries produced a SPEC Kit of acquisition policies in 1974.

Nevertheless, Library Acquisition Policies and Procedures is more comprehensive than any of these. Its organization enhances its usefulness, and it is up-to-date. If one doubts the need for this new collection, it should be remembered that many libraries do not have acquisition policies. Futas indicates the majority of libraries do not have. This reviewer's experience in four major academic libraries—three of which did not have written policies—tends to support this position. In addition, a survey in connection with the ARL SPEC Kit mentioned above indicated "a great deal of activity in the area of acquisition policy."

Minor annoyances included difficulty in finding footnote references, the point being made at least three times that policies represent the ideal and not necessarily the reality of the situation (p.ix, xiv, xxvii), indication on page ix that 500 questionnaires were sent while page xviii says more than 450 were sent, and the defensive stance regarding librarianship that is found in the preliminaries. However, the book is basically a good collection of documents related to acquisition policies and will be helpful to libraries in general.—Don Lanier, Head, Acquisitions Division, Auburn University Library.


This collection of essays was compiled for those librarians who are aware of changes in institutions, clientele, information tools, etc., and are willing to learn from understanding and sharing the experience of other professionals in the changing world. Thus these librarians will not maintain their status quo but will advance in competence, invigorate public service, and attain greater stature in the profession. The title of this volume is derived from the heading of part V, the last eighty pages of the book.

In the first part, after an introductory article by Daniel Bell, explaining his term "post-industrial society," four other sociologists react to his postulate.

Professionalism, of constant concern to librarians, forms the second section, with articles well chosen to present many aspects of this area that may be relevant to librarianship, from domination by professions to licensing of paraprofessionals.

Since professionals usually work in some kind of organization, the third part relates to their role in today's new and different managerial styles. Worker participation with shared authority, public service, bureaucracies at federal and state levels, relationships between clients and formal organizations, and the need for new policies to manage information in our now highly technological society are covered herein.

The fourth section deals with the services needed by the post-industrial society, different because of technological change, which influences the clients' demands. Computers, cable television, educational changes to meet older students' needs, how to deal with the conflicting requests from special groups and the politically powerful, a clear understanding of culture—all these will affect services.

Part V, the last quarter of the book, treats explicitly information services as they are to affect librarianship now or in the near future. The development of a model for information systems through analyses of information needs and use is the subject of the first article. From similar current studies of information use, etc., the second article critically evaluates library cooperation to determine how cooperative systems should develop. Library service in a mechanized library environment is the framework of the third rather technical paper. The last article focuses on special-interest
magazines, on-line retrieval services, and information brokerage as examples of how the library might compete in the information marketplace despite concomitant problems.

Building this book upon Bell's "post-industrial society," the editor erected a specific type of well-interfaced edifice, not a library, reflecting the expertise of a variety of artisans. The introduction compares various parts of the building to librarianship, while the bibliography cites library literature related to each section. Starting with a different concept, one might well fabricate a totally different structure with quite different craftsmen, with as valid and beautiful results.

For many librarians who seek to involve professionals from other disciplines in their research and teaching, this compilation will have much appeal. Critical thinking on the concerns of librarianship will occur more readily as a result of such interdisciplinary findings.

This descriptive review was deliberate so that librarians will know that only one-fourth of the book deals directly with library and information services. Any librarian worthy of the appellative "professional" will peruse this book with delight, make applications to the field, develop methods of procedure, and organize activities that derive from the critical thinking necessary in this crucial age in order to save the library profession for its present clientele and extend it to others who have not as yet benefited from it.—Rev. Jovian Lang, Division of Library and Information Science, St. John's University, Jamaica, New York.


This is a textbook based on a course taught by the author at the International Graduate Summer School at the College of Librarianship in Aberystwyth, Wales. Because of either the nature of the course or for some other reason, the scope is extremely broad for a 200-page book. Within its covers it attempts to provide an introduction to computers, a discussion of computerized library systems, and a discussion of computerized information retrieval systems.

After an "overview" chapter, there are three on computers: one each on hardware and software, and one on "setting up." These are brief but fairly clear; they naturally use British terminology ("backing store" for off-line storage, for example), but this seldom presents a problem in understanding.

The next four chapters comprise the section on library applications of data processing, or, as Tedd continually refers to them, "housekeeping activities." The phrase is reminiscent of the 1950s when such applications were considered too trivial to deserve serious study, information retrieval being just around the corner and obviously destined to make traditional library operations (and libraries) obsolete in short order. Perhaps because of such a view, the coverage of some "housekeeping" applications is very slight—automated acquisition systems, for example, are covered in a little more than two pages. Circulation control receives twenty-three pages, reflecting the widespread interest in such systems in Britain, with the treatment of cataloging and serials control somewhere in between these extremes.

The discussion of MARC concentrates so heavily on the British viewpoint that the reader is left with the impression that the development of MARC has been a joint effort of the United Kingdom and the Library of Congress almost from the beginning. Some basic information about MARC is omitted: there is no mention, for example, of the languages, publication dates, or types of materials covered by either LC's MARC Distribution Service or the counterpart service offered by the British Library.

Computerized information retrieval systems are treated in three chapters: one on indexing, one on selective dissemination of information (SDI), and one on retrospective search systems. There is a fairly extensive discussion of the various types of KWIC (Key Word In Context) indexes, a description of PRECIS (the Preserved Context Index System), and brief mention of one or two others. The SDI chapter explains the concept and the most common variations, then lists some of the SDI services available commercially—without, however, describing them. In the chapter on retrospective search systems, the two dominant commercial ones (SDC's ORBIT
and Lockheed’s DIALOG) are discussed briefly but without comparison, and the National Library of Medicine’s various MEDLINE services are then described more fully.

There is no bibliography, although there are references at the end of each chapter. There is a brief glossary and two appendixes that explain binary arithmetic and how to compute a Modulus 11 check digit.

For its original purpose—a brief introduction to the field for British students—the text is probably adequate. For American students, there are better and more pertinent works available; and for those already familiar with the basics of library automation this book offers very little that is new. For the British perspective on library automation, R. T. Kimber’s Automation in Libraries is older but more substantial, although Tedd’s book provides occasionally useful details on specific British systems. This volume is recommended for comprehensive collections only.—Stephen R. Salmon, University of California, Berkeley.


The late Ilse Bry viewed entries in a bibliography the way an archaeologist views shards—as material traces of an aspect of human activity, capable, like the pottery fragments, of yielding insights into the purposes, values, and daily practices of the culture that created and used them. Thus “in sociobibliography, bibliographic data are investigated for a variety of scientific purposes independent of users’ needs to consult the publications” (p.237). Generally the purpose is to shed light on the character of communication in scholarly disciplines and the roles played by a discipline’s literature in shaping the knowledge to which the field lays claim.

The Mental Health Book Review Index, issued from 1956 to 1972 by a committee of librarians headed by Ilse Bry, was a location tool for reviews of books in the behavioral sciences and also a vehicle for investigation and discussion of the use of bibliography as an analytic instrument. Editorials published with the index pointed out trends and relationships discernible in the index listings and considered how these might contribute to greater understanding both of the history and sociology of science, and of the requirements of scientific bibliography. These editorials, some of which have been reprinted previously in journals, are here collected in book form under the editorship of two of the principal collaborators on MHBRI.

The essays raise a number of interesting issues: the contrast in purpose and point of view between subject bibliography, as conceived by the academic community, and library cataloging (essay 1); the scholarly contribution of book reviews and distortion of their scientific function by evaluative perspectives imported from literary and art criticism (essay 4); ways in which conventional bibliographic styles and standards suppress scientifically valuable data about books (essay 7); the potential of bibliographic organization for shaping the character of a field of study (essay 8) and for illuminating trends in a subject’s development (essays 9, 10, 13).

Although the earliest pieces in the book were written nearly twenty years ago, the discussion remains fresh and provocative, characterized throughout by the author’s clear-sighted view of the contribution of bibliography to science and her wide-ranging historical and philosophical erudition. Indeed, Bry’s ideas may be said to have grown in interest and relevance now that the flowering of computers has so greatly multiplied bibliographic possibilities without contributing the knowledge needed for intelligent choices. Librarians curious to decipher meaning behind our daily tools, and concerned to make them more effective, will value this book.

One complaint: The final essay, which is the most comprehensive statement of the concept of sociobibliography, is included only in summary form. A fuller version may be found in Morris Gelfand, ed., Access to Knowledge and Information in the Social Sciences and Humanities (Queens College Press, 1974).—Thelma Freides, Swarthmore College Library, Swarthmore, Pennsylvania.
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What an infuriating grab bag of a volume this is! If only it had been called “A Source Book of Resource Data Collected by LIBGIS” or some such title rather than *National Inventory of Library Needs*; the one title so modest, the other so certain, so sure.

The book is a compilation of public libraries’, school library/media centers’, and academic libraries’ data reported in the 1974 and 1975 LIBGIS surveys to the National Center for Education Statistics. The data are then compared with standards “to the degree that professional deliberation has provided some consensus on the levels ‘needed.’” Then projections of “need” are made.

To concentrate on academic libraries: Did you know that a one-time expenditure of $1.5 billion would buy us all the books we are missing and that we would only also have to increase our annual expenditure by about a third, from $300 million to $400 million a year, and we could keep steady? Yet did you also know that, in total, collections in academic libraries are 99 percent “adequate” but that two-year colleges are 50 percent “adequate” and public four-year colleges are exactly 100 percent “adequate”; that private universities are 177 percent “adequate,” while public universities are only 111 percent adequate? What a mistake to qualify an absolute term like “adequate,” and what nonsense the results!

What I’ve tried to illustrate in the above examples is the wisdom of a comment made by Boyd Ladd, the compiler, in his preface: “Interpretive analysis has intentionally been limited, in the expectation that many analyses will and should be made from different philosophic stances.”

Now, therefore, my philosophic stance, again concentrating on academic libraries:

1. The data, inasmuch as we have learned to count things consistently, are fine. Mr. Ladd’s compilations and tables are excellent, diligent, and comprehensive.
2. The data are not strong enough to withstand the analysis thrust upon them, and the misinterpretations that are bound to follow when budget officers get their hands on them.
3. The standards are wrong and, in some cases, have been specifically discredited. Current knowledge and the results of work, such as the Pittsburgh work on collection use, the “inventory law,” and so on, have not yet been incorporated into “official” standards.
4. The standards and the data must be improved before such analyses can be made.
5. The standards are all input standards. What is needed is a performance standard, the technique for the attainment of which will vary from library to library. That is, some will need to invest in collections, others in interlibrary loan, others in on-line retrieval, others in student instruction, and so on.
6. I propose the following performance standard: 90 percent of all requests made of the library satisfied within forty-eight hours.

In fairness, I have to say that both Al Trezza in his foreword and Ladd in his preface recognize the shortcomings and weaknesses. They rightly see the work as being stimulative of further work, particularly in the essential field of user studies. As Trezza says in his foreword:

The extensive data will no doubt suggest some relationships and interpretations not expected, and lead to some hypotheses which challenge the conventional wisdom in our profession. Resulting questions are expected to stimulate further analysis leading to a better understanding of the resources appropriate to effective library and information services.

This compilation is probably the most important book of the year. We should all buy it, read it, understand it; and then sit down and have a good long think.—Glyn T. Evans, Director of Library Services, State University of New York, Albany.

McCullough, Kathleen; Posey, Edwin D.; and Pickett, Doyle C. *Approval Plans and Academic Libraries: An Interpre-
**Approval Plans and Academic Libraries: An Interpretive Survey**

This book provides a much-needed source for the practitioner. The primary purpose of the study is to determine the state of the art among academic libraries. These findings are then compared to the approval plan experience at Purdue University.

The authors represent a rather unique team of two librarians and a businessman, each recognized and respected for long-term contributions to the profession.

The book describes the results of the survey that was mailed to 144 academic libraries (101 responding) and analyzes the material in both detailed and summarized formats in seven sections. The interpretation of these results offers probably the most valuable and intriguing part of the book. The design of the research methodology and information gathering questionnaire and the independent evaluation and interpretation of the findings are both significant achievements.

McCullough points to the fact that the survey was not concerned with acquisitions routines but focused instead on the function of approval plans in collection development. She says that an approval plan is ultimately a collection development tool and only incidentally an acquisitions device. She discusses the various difficulties brought out by the survey respondents and contrasts procedures and problems encountered by libraries, whether having centralized or decentralized collections. Her sharp observations and analytical solutions should be of great interest to the reader.

Posey writes from the subject-specialist viewpoint. He looks on approval plans as a great asset to collection development programs and as an attractive labor saving tool. He is amused by the critics of approval plans who claim that such an approach to collection development is inferior. Posey defends approval plans, point by point, and justifies his reasons with convincing arguments. He states that the engineering library at Purdue purchases books for two reasons: (1) to support teaching and research and (2) to build an archival collection for the use of retrospective researchers. These reasons are well met by the approval plan at that institution.

The suppliers' view is presented by Pickett's *Response*. Pickett underscores the fact that the approval plan concept has long suffered from a basic misunderstanding of its intent, unrealistic expectations of its strengths, and little attention to any limitations. He emphasizes the importance of profile design. Without a good profile and knowledge of its application, the best plan is certain to encounter difficulties. His comments and perceptions may be most helpful in creating a better understanding and stronger relationship between libraries and vendors.

The publication is largely a presentation of library practices in matters of approval plans. The information it contains should prove helpful to individual institutions seeking to establish comparative guidelines of common procedures. Approval plans are, however, unique institutional experiences from which helpful interpretations and generalized conclusions can be drawn, but cautiously applied.

The book principally addresses approval plans as a collections-development device and a vendor service, which fact makes this work valuable and attractive to a wide range of readership. It is well written, carefully organized, and has a rather complete bibliography on the topic. For these reasons, *Approval Plans* should be considered a significant and major contribution to the field.—Peter Spyers-Duran, Director of the University Library, California State University, Long Beach.

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Unlike many proceedings volumes, this one was well worth publishing. The work reported is both new and significant, the
papers are readable, and the price is not exorbitant in today's terms. PRECIS (Preserved Context Indexing System), developed by Derek Austin and his associates at the British National Bibliography, is probably the most important innovation in indexing since coordinate indexing was developed by Taube in the 1950s.

The workshop combined descriptions of PRECIS and its use at the British Library with papers on research and applications elsewhere. Austin's three papers on development of the system, its syntax and semantics, and management aspects go into more useful detail than the several articles that have appeared. Jutta Sørensen's paper on multilingual aspects presents us with tantalizing glimpses of the possibilities of automatic translation of PRECIS strings so that indexing done in one language can serve several others. Intellectually, such transformations appear to be possible; it is too early to judge yet whether they would be operationally practicable.

The section on research projects contains three comparisons of PRECIS with subject headings and title words, by Phyllis A. Richmond, Valentina de Bruin, and Ann H. Schabas. De Bruin's report will be of special interest to academic librarians because the eventual goal of her work is to apply PRECIS in the library of the University of Toronto. She devised comparative PRECIS, subject headings, and keyword indexes for books in special subjects for departmental librarians to use. Richmond compared PRECIS (from BNB), LC subject headings (from OCLC and NUC), and a KWIC index; while Schabas offered an SDI (Selective Dissemination of Information) service from UK MARC tapes, comparing retrieval on titles, PRECIS subject headings, and combinations of these. The first two found that PRECIS provided more access points and more precise indications of the subject matter of the work than did subject headings. Titles performed as poorly as would be expected. Schabas' study was still in progress, but the results appear to be similar.

In the section on practical applications there are reports of manual PRECIS application in a Canadian high school library, of audiovisual indexing at the College Bibliocentre in Ontario, and of film indexing at the National Film Board of Canada. The authors are all enthusiastic over the quality of access available with PRECIS.

C. Donald Cook provides a thoughtful discussion of the future of practical application of PRECIS in North America in the context of subject heading dominance via Library of Congress and National Library of Canada practice.

The reviewer is left with some questions that are not criticisms either of this book or of the PRECIS system, but rather of the nature of "where should we go from here?"

How costly is PRECIS to apply compared with current systems? A study1 has been performed that should answer this question, but the results have not been disseminated in the United States.

Since many of the horrid examples given in comparisons with subject headings are simply bad cataloging and not inherent in the system, how would PRECIS fare if its authority files contained as many millions of records as LC's subject heading files?

If LC and North American libraries finally face the logical consequences of the knowledge that the present subject heading system is breaking down and decide to adopt a new system, should PRECIS be adopted or should we go back to square one and try to determine what kind of system would best meet our needs?—Jessica L. Harris, Associate Professor, St. John's University, Jamaica, New York.

REFERENCE


Simpson has provided a well-written, comprehensive guide to library research that should serve as a model for guides in other social science disciplines. While designed specifically for researchers and students in public administration, this volume encompasses material of use to all fields of the social sciences and, therefore, supplements guides such as The Student Sociol-
The guide under review differs from most in that it emphasizes bibliographic tools and techniques necessary for research, rather than stressing descriptions of journals, theories, etc. While such information is provided, it is not included at the expense of bibliographic information. Traditional topics, such as the card catalog, indexes/abstracts, bibliographies, and government documents, are discussed, as are archival research and computer literature searching.

Regarding the card catalog and government documents, one statement is somewhat misleading. Simpson indicates that "The only separately published items generally not [emphasis in original] included in the catalogs are those special collections of documents maintained on microform" (p.87). Many libraries, especially those employing SuDocs classification, do not catalog documents in any format, not only microform. This criticism notwithstanding, this is an excellent guide that will be of use to researchers and students in a wide range of social science disciplines.—David R. McDonald, Social Science Bibliographer, Farrell Library, Kansas State University, Manhattan.

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Balachandran, Madhava. A Subject Approach to Business Reference Sources. Univ. of Illinois Graduate School of Library Science Occasional Papers, no. 128. Champaign, Ill.: Graduate School of Library Science, Univ. of Illinois, 1977. 45p. $2.00.


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Foreign Trade Marketplace. Edited by George J. Schultz. Detroit: Gale, 1977. 662p. $48.00. LC 76-20342. ISBN 0-8103-0981-5. Consists of two major parts. Part One gives an overview of the mechanics of international trade from the standpoint of American companies. Part Two is a directory of business contacts, financing sources, insurance transport services, and a variety of other marketing and supporting services or references.


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Women's History Research Center. Female Artists Past and Present. Berkeley, Calif.: Women's History Research Center, 1974. 158p. $6.00 to individual women. $7.00 to groups and institutions. (Available from Women's History Research Center, Inc., 2325 Oak St., Berkeley, CA 94708.)

A directory/bibliography of women in the visual arts. Individual women have been listed alphabetically according to the media in which they work.

Women's History Research Center. Films By and/or About Women, 1972: Directory of Filmmakers, Films, and Distributors Internationally, Past and Present. Berkeley, Calif.: Women's History Research Center, 1972. 72p. $3.00 to individual women. $5.00 to groups and institutions. (Available from Women's History Research Center, Inc., 2325 Oak St., Berkeley, CA 94708.)
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ABBREVIATIONS

Standard abbreviations for names of organizations, ALA, ACRL, LC, etc., are alphabetized as if spelled out. Other abbreviations:

- appnt.
- asst.
- coll.
- comp.
- ed.
- f.
- inst.
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- prof.
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- (ULISYS Universal Library Systems, Ltd.)
- Gaylord's Circulation Control System
- 3M's Inventory Control System.

The 92 page report is contained in the May, 1977 issue of LTR now available to non-subscribers as a single issue for $40.
CITATION ANALYSIS OF PSYCHOLOGY JOURNALS

by Murray J. White and K. Geoffrey White

American Psychologist, May 1977, p. 301-305

ABSTRACT: A citation analysis was conducted for 57 psychology journals. Total citations to articles published in each journal in 1972 and 1973 were counted from a sample of pages (10%) in the Social Science Citation Index. Journals were rank ordered according to citation frequency per articles published in each journal during the 2-year period.

TABLE 1: Rank order of Journals by Mean Citations per Published Article

<table>
<thead>
<tr>
<th>Journal</th>
<th>Rank</th>
<th>Citations per article</th>
<th>(Total citations)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Journal of Verbal Learning and Verbal Behavior</td>
<td>1</td>
<td>2.8</td>
<td>(490)</td>
</tr>
<tr>
<td>American Psychologist</td>
<td>2</td>
<td>2.7</td>
<td>(470)</td>
</tr>
<tr>
<td><strong>Journal of Applied Behavior Analysis</strong></td>
<td><strong>3</strong></td>
<td><strong>2.5</strong></td>
<td><strong>(350)</strong></td>
</tr>
<tr>
<td>Journal of Mathematical Psychology</td>
<td>4</td>
<td>2.4</td>
<td>(110)</td>
</tr>
<tr>
<td>Journal of Experimental Social Psychology</td>
<td>5.5</td>
<td>2.2</td>
<td>(210)</td>
</tr>
<tr>
<td>Psychological Bulletin</td>
<td>5.5</td>
<td>2.2</td>
<td>(420)</td>
</tr>
<tr>
<td>Journal of Experimental Child Psychology</td>
<td>7</td>
<td>2.1</td>
<td>(400)</td>
</tr>
<tr>
<td>Child Development</td>
<td>8.5</td>
<td>2.0</td>
<td>(570)</td>
</tr>
<tr>
<td>Journal of Comparative and Physiological Psychology</td>
<td>8.5</td>
<td>2.0</td>
<td>(1010)</td>
</tr>
<tr>
<td>Developmental Psychology</td>
<td>10.5</td>
<td>1.8</td>
<td>(520)</td>
</tr>
<tr>
<td><strong>Journal of the Experimental Analysis of Behavior</strong></td>
<td><strong>10.5</strong></td>
<td><strong>1.8</strong></td>
<td><strong>(390)</strong></td>
</tr>
<tr>
<td>Psychological Review</td>
<td>12</td>
<td>1.5</td>
<td>(120)</td>
</tr>
<tr>
<td>Journal of Educational Psychology</td>
<td>13.5</td>
<td>1.3</td>
<td>(250)</td>
</tr>
<tr>
<td>Journal of Social Issues</td>
<td>13.5</td>
<td>1.3</td>
<td>(170)</td>
</tr>
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The above list includes only the top 14 of 57 journals listed in Table 1.

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