EDUCATION FOR LIBRARIANSHIP:

THE DESIGN OF THE

CURRICULUM

OF

LIBRARY SCHOOLS

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EDUCATION FOR LIBRARIANSHIP: THE DESIGN OF THE CURRICULUM OF LIBRARY SCHOOLS

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INTRODUCTION

In recent years the University of Illinois Graduate School of Library Science has held three conferences on various aspects of education for librarianship. The fourth such occasion was scheduled for September 1970, and the topic chosen for consideration was the curriculum of library schools. It appears that this was indeed a happy choice, to judge from the interest in the conference evidenced by the profession and from the many reports of schools all over the country which are engaged in curriculum revision and experimentation.

One of the innovations of this conference was that one person was accepted without payment of any registration fee from each of up to fifty schools—graduate or undergraduate, accredited or unaccredited—who was under forty years of age and had been a full-time faculty member for at least one year. The genesis of this offer was in Neal Harlow's letter of reply when he was invited to give the opening address. What were we doing to involve younger faculty in our conference, he asked. Upon reflection, the best idea we had was the offer described above. In all, thirty-two persons came to the conference under this arrangement, or 40 percent of the total registrants. The professional schools definitely need the energy, new ideas and commitment of these younger people. The future always stretches farther ahead than the past does behind us.

The need to prepare for the future was evidenced in most of the formal papers and informal discussions. It is one thing to agree that we must plan for the future, with the only certainty being that things will be different from what they are now; it is another matter to specify just how to do this in the curriculum of a school. Several of the papers in this volume give some help to those who face this problem, and probably the most one can expect are insights, hints, suggestions, advice, and the record of the experiences of others. In this writer's limited acquaintance with the educational process, no problem is more difficult—or more important—than how to formulate a curriculum, and especially one for a professional school.

For the record it should be stated that Sarah R. Reed was unable to be present at the conference; her paper was read by Frederick A. Schlipf of the faculty of the University of Illinois Graduate School of Library Science. Similarly Margaret E. Monroe's prepared paper was read, in her absence, by Charles A. Bunge of the faculty of the University of Wisconsin Library School. It had been understood from

the beginning that Andrew D. Osborn would be unable to attend the conference. His paper was preprinted and distributed to the registrants, and discussed by a panel of conference participants led by Laura C. Colvin of the faculty of the School of Library and Information Science of the University of Western Ontario. The final session of the conference consisted of a panel discussion on the procedures for implementing curriculum revision. The panel consisted of Rose Vainstein (University of Michigan), Charles A. Bunge (University of Wisconsin), Nancy Freeman (University of Minnesota), and Haynes McMullen (Indiana University).

As is usual in these conferences no record was made of the panel discussions or of the question and answer periods following each paper. In a sense this is one of the plus values which participants in the conference receive over and above the content of the formal papers themselves; however, some of the main points brought out in these discussions will be summarized here.

It is noteworthy that both the first and the last papers here recommend radical revision of the curriculum of library schools, and both authors are each well over fifty years of age. Mayhew reported that the schools of other professions are also in ferment, but some people at the conference were against drastic change in library school curricula. It was reported that the ALA Committee on Accreditation is not opposed to drastic change but neither is it requiring nor promoting such action. In the experience of some library schools at least, their graduate college or parent university had not made difficulties for curricular reform, though a school may have to ask for freedom to make changes or even fight for it.

None of the schools represented at the conference which have recently undergone curriculum revision were prepared to claim that they had the final or universal answer, or even an answer which could be copied by other schools. Even if two or more schools come out eventually with the same set of curricular goals, it is desirable that each works its way to that conclusion on its own. It did seem that the new curricula which were described are characterized by greater flexibility for, and by more choices to be made by the individual student. One of the older participants said that he had had but one choice to make in his B.L.S. program almost thirty-five years earlier, viz., between advanced cataloging for academic libraries and advanced cataloging for public libraries.

Two or three speakers added a new twist to the old dilemma as to whether library schools should follow practice or lead the process of change; they pointed out that library schools have not always even kept up with the best practice in the field. It does appear certain that the jobs which society expects and needs librarians to perform will be ever more complex and responsible. In librarianship, as in other

professions, there is a continual process of shifting specific duties from persons of higher skills to those of lesser.

How to conduct the process of curriculum review is far from obvious. Most library schools engaged in this activity in recent years have involved their present students; some used outside consultants in library science, education, or other fields, but some did not. It seemed to be generally agreed 1) that the whole faculty should be involved in the process; 2) that curriculum review needs to be done periodically at fairly frequent intervals; 3) that it is necessary and desirable for the whole library school faculty to know what is being taught in the most important courses at least, and to alter their content if it seems wise to do so; and 4) that inevitably consideration of content leads to desirable changes in teaching methods. As one speaker said, the ideal way to review the curriculum is to close the school for a year and have the faculty devote its full time to the revision.

We must evaluate a library school curriculum ultimately in terms of the changes it induces in the behavior of those who complete the program. Just so, this conference will be judged eventually as to how much and how wisely it influenced library school educators in their efforts to forge new and better ways by which to prepare people for professional service in libraries. If it is ever concluded to have been a contributing factor to curriculum revision of library schools, the credit will belong to the ten people who prepared the following papers, and to the participants who helped sharpen our sensitivity to the implications of these papers. In addition I owe a debt of thanks to my many colleagues who helped conduct the conference, and particularly to Donna D. Lenfest, the Library Extension Division coordinator for this conference.

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DESIGNS ON THE CURRICULUM

Having picked an inexplicit title (on purpose), I want to say at once what this paper is about: 1) it is about curriculum, not courses; 2) it regards librarianship as a "field," not as an isolated "activity"; 3) it takes a theoretical approach; and 4) it argues for change, or rather for changing—that is, for making things distinctly other than they are. Obviously I have far more than superficial "designs on the curriculum" as the title ironically implies. I do not recommend making belated repairs, launching a new Detroit model, or turning out a fashionable maxi-version of the same thing but rather creating a continuously contemporary production, based upon a clear understanding of what is required.

My title could just as well have been, "Why Library Schools?" Whereupon I would then have asked, "Why Engineering Schools if Only a Plumber is Needed?" or "Why Medical Schools When an Aspirin Will Do?" We do not have to hire a lawyer to fix a parking ticket, and publishers somehow manage without elaborate professional curricula. If our wants were exceedingly simple, and we stayed away from trouble, shunned other people, and were innocent of curiosity, wrath, ambition, and fear, we could live at quite a modest level of social existence without recourse to specialists of any kind. Were the world not full of crime, machines and bridges, politics and literature, cancer, information, ignorance, and death, it would be a much different place than it actually is; we could then abolish the professions, shut down the professional schools, and live like Adam and Eve in Paradise. But somewhere man took a different turn, and his accomplishments, yearnings, and woes have fragmented and multiplied until society has found it necessary to delegate specialized knowledge, skills, and responsibilities to particular groups—from architects to brain surgeons—and a considerable set of them has been granted to librarians. In the 1880s, Melvil Dewey's genius picked up a batch of these specializations which librarians still cherish and surrender only with anguish.

If librarians have been invented by an inscrutably wise Society to serve as agents in transmitting her intellectual resources, those who produce librarians have a grave responsibility for their performance.

Also Society is infinitely resourceful, and if any of the tools she has improvised for her security or survival fails or fumbles in its purpose, another is likely to be thrown up to replace it. All around new forms and means are appearing to accomplish what old ways and structures would not do—including, in the information field, scores of active discipline- and mission-oriented information services and the burgeoning and highly competitive interests represented by the Committee on Scientific and Technical Information (COSATI), the American Society for Information Science (ASIS), and the Department of Audio-Visual Instruction (DAVI) of the National Education Association (NEA), to name a few.

In the 1880s Dewey's library school was a response to changing times: the need for library workers, the breakdown of the apprenticeship system, and the growth of technical education. His purpose was to turn out librarians by systematically reproducing experience more quickly and effectively than it could be done on the job. He described the program at Columbia and Albany as "a purely technical course," "a systematic apprenticeship with the main reliance . . . on experience."[1] Other educational choices might have been made. There were those who would associate librarianship with related fields of learning, and those who regarded it as a practical art which could not be imparted through formal training. But Dewey's voice was the strongest and perhaps the most timely. The technical education movement, of which he was historically a part, was newly invented to fill the gap created by the decline of apprenticeship practice. It was not intended to fit students for intellectual and social leadership but to produce good workmen. Reflecting its undemocratic European background, it would indeed not encourage those who belonged in the nation's workshops "to aspire to roles of leadership beyond their station."[2] Thus, the apprentice became a student, the library a classroom, the supervisor an instructor, and, when Dewey inaugurated his technical education program in 1887, the American library school was born.

As historical studies show, learning how to do the job gave way to learning the elements of each operation; courses in reference, bibliography, and the selection of books were well lodged in the curriculum shortly after 1900. By 1920 most of the now familiar core—cataloging, classification and subject heading work, and library administration—had been added to these staples. "It is a principle underlying all schools of practical instruction," stated Julia E. Elliot, an early educator, "that they must follow and not lead the development of the profession";[3] and in attempting to keep up with the field the schools added new courses reflecting evolving practice without modifying the existing base: county libraries, school libraries, large libraries, bibliographic cataloging, and, when their time came, systems analysis and library automation. Formal schooling, by

promoting uniform practice in libraries, made training in the accepted procedures both desirable and feasible. The self-made librarian began to be replaced by trained personnel, but the whole educational system for librarians came to be manned by the self-made teacher who possessed personal qualifications and practical experience but few ties to the world of learning. Professional education came to be regarded as a branch of library work rather than as a branch of learning, and the university environment in which it found a place proved to have a stronger influence upon the requirements for admission than upon the level of study.

To adapt one of André Maurois's comments about Marxism to the present situation, basic education for librarianship today can be seen more as "an intelligent report" upon society at the turn of the century than as a program for the 1970s; and much about the profession and the problems of the curriculum of librarianship is revealed by this interpretation. More than a ghost of Dewey still stalks our academic halls, speaks through our catalogs and literature, and supports moves to multiply good workmen.

In today's complex and changing fields of education and communication, society is justified in expecting a high level of leadership and performance from librarians, and I doubt that this is often realized. Neither librarians nor the producers of librarians, for example, understand what the function of libraries is in the educational process. There is well substantiated evidence "that a university's general collection is not widely used by undergraduates, and that when it is used, such use does not seem to have a significant relationship to academic achievement."[4] Notwithstanding this stark assertion from the report of the National Advisory Commission on Libraries, it has apparently not turned an academic hair, even though an evaluation of the usefulness of such libraries was recommended. Both school libraries and libraries for undergraduates have been charged with being educationally sterile. All over the country slashed public library budgets, even of the great institutions, have produced mostly acts of political self-defense.

Critics have often noted that libraries seldom become truly involved with the communities they attempt to serve and that no corpus of scientific knowledge has been created upon which relevant action can be based. Much of the work of librarians continues to be manipulative, requiring little professional knowledge, responsibility, and skill, and even at its presumably highest level—in selecting and organizing material, "reference" work, and administration—performance is on a largely empirical basis, by rule-of-thumb, or by reference to codes, experience, and local regulation. Practitioners are seemingly satisfied with making superficial and, as often as not, downright erroneous responses to inquiries for information which the applicant has not clearly expressed and the librarian does not

sufficiently understand, giving him quickly what he wants rather than what he needs with the hope that he will go away. Not many librarians will take personal risks, if this is required, to serve the larger interests of society. Some wish to classify themselves as faculty rather than as librarians in order to command the title and perquisites of another profession. How many are ready to take a stand on the important issues of the day or to think them through for the profession beyond the reaches of some past or present dogma? However much or little the public may value libraries, how important do librarians believe they are?

Practitioners declare the library schools are at fault, and the schools insist that libraries must mend their ways, and so the game of Who-Makes-the-First-Move? sustains the status quo. I thought of entitling this paper, "Curriculum, the Indecisive Egg," and opening with this stanza:

> The Indecisive Egg!
>   Should it be laid?
> Or should the Hen come first?
> And if the Hen,
>   How could it then
>   Become without a Source?

But now, when every man and woman, and all children over thirteen, know about the act of procreation, it is not what comes first but what comes *next* that is significant. I am convinced that library schools cannot themselves break the continuity of a traditional profession simply by turning out bright new professional people; they must also work directly and symbiotically with practitioners, particularly at the administrative level. We, as educators, cannot evade our responsibility as innovators, since we represent for the most part what hope there is that growth and not decay will triumph. Our major means are curricula and research, and in these areas the next step is always *ours*, not *theirs*.

CURRICULUM

"Education" is full of perplexing intentions, among them to instruct, inform, train, develop, indoctrinate, and discipline. It is better discussed in behavioral than in strictly pedagogical terms, since it can affect the whole range of human conduct, from how and what an individual believes, thinks, and feels to what he does to realize his potential in society. Human behavior can be directed and extensively controlled through indoctrination, training, and discipline, but if we are to produce a core of people to man an essential profession, we must find suitable candidates, then prepare them for responsible performance by developing active behavioral patterns based upon whatever we decide are the essential understandings,

insights, and methodologies which can be derived from all of the relevant areas of human experience.

A curriculum with such a purpose is, first, an organized system of learning opportunities, not content. It is a means to bring about psychological change in behavior; it is not *telling*. It must be presented to the learner in intelligible patterns and should therefore follow the structures of knowledge which are inherent in the appropriate intellectual disciplines. Although a curriculum is an institutionalized plan for education, it must become a personal process with particular students, for "when an individual learns logically meaningful propositions . . . he does not learn their logical meaning but the meaning they have for him."[5] So both the logical order of knowledge (which is intelligible) and the psychological order of the student's development (his cognitive processes and knowledge) must be taken into account. If education is to have a lasting effect upon the behavior of an individual, it will be because of a process of personal reaction which a logically arranged curriculum (and inspired teaching) sets off in him.

Learning to think about anything does not develop directly out of course content. A "subject" in this context is "fundamentally a mode of inquiry about something,"[6] not factual and descriptive materials. Ways of thinking and feeling vary among the sciences, social sciences, and humanities (and within these areas), and their relevant techniques and points of view need to be taught and tried out on samples of the library field's content. When students are provided with their own individual means of access to a range of methodologies, viewpoints, and ideas (along with the basic terminology, elemental facts, and conventions of the pertinent disciplines), they are equipped for and can be motivated to further independent inquiry, action, and reaction. It is not the content of a field, then, that is to be "covered"; a school cannot teach, nor can a student learn, the sum of human knowledge in any area. We teach a subject in order "to get a student to think mathematically for himself, to consider matters as the historian does,"[6] and he can then pursue his own interests with or without our assistance.

A fundamental current theory of learning hypothesizes that the human nervous system, as a data processing and storing mechanism, is so constructed that new ideas and information can be meaningfully learned and retained in the mind only to the extent that more inclusive and relevant concepts are already available there.[7] This scaffolding of knowledge is erected with the most inclusive concepts in any subject area at the apex and with progressively less inclusive and more differentiated and factual data subsumed (that is, ranged in a graded or hierarchical order beneath). If this structure of knowledge in the human mind is "stable, clear, and suitably organized, accurate and unambiguous meanings emerge and tend to retain their

. . . strength and availability.''[8] And, inasmuch as this existing structure in the individual's mind reflects the outcome of all previous learning processes, it can in turn be most efficiently modified by organizing new material in a similarly logical and hierarchical structure for which the learner's mind already provides suitable anchorage. This logic is inherent in the intellectual organization of the various subject disciplines—supported by the curriculum-maker's skill in arranging the presentation in a logical sequence. Whenever these conditions are met, learning can proceed as rapidly as the details can be fitted into the individual's existing framework of concepts and principles.

This basic theory of learning does not, alone, provide a complete foundation for organizing a curriculum, since psychological, social, and cultural factors, as already mentioned, are also relevant. In addition to the learning process described, which applies to normal reception learning, there is a different kind of process for discovery learning in which the learner develops his own new categories of knowledge, which are then incorporated into his knowledge structure by subsumption.[9]

Curriculum should, then, be built around the great organizing principles, the concepts and methods of inquiry which give structure to a subject and attempt to make a coherent system of its aspect of the universe. Providing such logically intelligible patterns simplifies understanding and makes possible the transfer of learning from one situation to another similar one. Teaching content outside this logical context is impractical in several senses: it is difficult or impossible for the student without a theoretical framework to generalize what he has learned in relation to what he will encounter later, the knowledge will not be rendered worth knowing by being made useful in his thinking, it will have little reward in terms of intellectual excitement, and any knowledge that may be acquired (by rote) without a structure to tie it together is likely to be soon forgotten.[10]

In formulating a curriculum one is in fact stating a philosophy of education, and stating the objectives of an educational program is where curriculum planning begins. "If the purpose of stating the objectives were merely to publish something attractive and inspiring . . . in the college catalogue, the task would not be too difficult."[11] But to state the objectives upon which a curriculum can be built is another matter. These objectives should identify explicitly "the ways in which students are expected to be changed by the educative process. That is, the ways in which they will change in their thinking, their feelings, and their actions."[12]

Have library school faculties ever clearly predetermined what kind of librarian they mean to produce? Are their graduates to give the highest priority to bibliographic or to social responsibility; to users or to means? Are they expected to have a working acquaintance

with certain machines; to understand the nature and significance of "systems"; to develop a capability for orderly planning; to be able to analyze any kind of operation; to appreciate the difference between collegial and hierarchical organization in libraries; to make judgments about which resources are important, which trivial, and which useless; to be able to "negotiate a question" with an inquirer; to participate effectively in the acquiry/inquiry learning cycle; to differentiate between the wants and needs of users; to accept full personal responsibility in providing advice and information; to function consciously within the social process of communication; to accept the necessity for change; to develop a sense of mission in promoting the public good and the self-realization of individuals; to understand the nature of censorship; to stand up and be counted on significant questions in the profession and society; to apply the methods of the pertinent disciplines; to appreciate the power and utility of theory; to be familiar with the principles and practice of research; to visualize the library's place in human culture; and to develop specific knowledge and skills?

This list of potential behavioral changes which the curriculum is meant to bring about—and which, if realized, will produce the kind of library school, librarian, and library educators desire—has a world of possibilities. But with the catalog of them in hand, we can go on to the next order of action, which is to sort them out and set priorities. The objectives might be arranged in some such categories as: 1) professional knowledge and attitudes to be acquired, 2) intellectual abilities and skills to be developed, 3) methods of acquiring knowledge relevant to solving the problems of librarianship, 4) conditions and problems of contemporary life to which these relate, 5) appropriate ethical behavior, and 6) attitudes of scholarly concern. If the faculty does the listing, arranging, and ranking of these objectives, they will be forced to make conscious choices of what they believe to be the relevant needs of librarians and what their students should and can learn.

It is not easy to set up a schedule of clear-cut objectives in a sequence in which they can be systematically attacked and achieved. "It is difficult to do the special kind of clear, objective thinking required in preparing unambiguous objectives . . . . Whether because of problems in analyzing the behaviors involved in an objective, or because of a lack of the dogged persistence required for success, many people seem unable to develop the sequenced set of objectives which is required."[13] Nevertheless, choosing a destination before take-off is part of the orderly process of arrival.

Once the objectives have been determined, the time has come to identify the areas of subject matter which will be likely to make the greatest contribution to the production of the proposed behavioral changes. The applied disciplines, it has been observed, are for the

most part "dependent on and derivative from the fundamental dis-
ciplines" that are concerned with "cognition alone and not for the
solution of practical problems"[14] (and the library field, seen in this
context, is highly derivative except for its distinctive area of bib-
liography and some techniques relating to the evaluation and selection
of materials and information). But the focus in each of the fields is
upon the individual discipline, not upon the relationships of the fields
to each other (with bibliography, traditionally, being no exception in
emphasizing listing and description to the exclusion of any broader
social responsibility). The curriculum-maker, however, must be
concerned with both the structure of the disciplines and of the in-
structional program within which the disciplines are to function.
Although the materials of instruction are to be drawn from relevant
subject fields, they need not be organized along strict disciplinary
lines, "concrete social reality" not being "mirrored in the findings
of any one discipline."[15] There are interconnections among the areas
of study—the social sciences, for example, all seeking to explain
man's life in society; but the focus of the library schools is upon the
objectives chosen and the overriding professional problem of com-
municating human knowledge.

In keeping with the theory of learning already discussed—which
postulates an existing framework of knowledge in the student's mind
upon which new ideas can be hung—the curriculum should be organ-
ized to move from the most inclusive to the more particular and
factual. A more familiar procedure has been to organize similar
materials topically and to present them at undifferentiated levels of
conceptualization; though logically sound, this standard textbook
approach is psychologically incongruous, since students are required
to memorize the details of unfamiliar disciplines before they have
acquired an adequate framework of relevant general concepts into
which the details can be plugged.[16] Thus, introductory courses should
not serve up the leftovers after the rest of the program is set but
should present the most inclusive concepts relating to the field, and
should lead to further inquiry. Advanced courses should be so, not
because they are regarded as being more difficult, but because they
call for more sophisticated, detailed, and mature conceptual analysis
and more abstract methods of inquiry.[17] The curriculum should
identify the methods of acquiring knowledge which are relevant to the
field—sociological, bibliographical, mathematical, linguistical—and
provide some meaningful trials. It should help the student integrate
the whole program into a body of knowledge which is effective in
solving professional problems. It should interest the individual and
thus take advantage of a major source of motivation. If there are
generic classes of knowledge in the field, the curriculum obviously
cannot be a cafeteria of random selections, although elective courses
and independent study, as pedagogical devices, are part of a sound

educational diet. The whole curriculum should be conspicuously arranged to associate students with materials, teachers, and environment with a degree of continuity and integrity that is impossible outside the school (and using exemption examinations in such a program in lieu of substantive learning opportunities would constitute a meager form of educational practice).

It has long been recognized by the library profession that the undergraduate arts and sciences are an integral part of the librarian's education. Professional education is usually the fifth year of a five-year curriculum, of which the first four are controlled by the undergraduate college. The significance of this relationship and of the criteria used for admission to graduate school is made clear by the theory of the learning process described earlier, wherein the existing structures of knowledge in a student's mind provide the framework for future learning. Whether the existence of these structures in a given list of subject fields at the time of admission will determine the limits of the school's influence upon him is worthy of diligent study and experimentation—also taking an applicant's motivation, aptitude, and maturity into account (however they can be divined).

The professional school, in the fifth year, is thus primarily responsible for teaching the "professional sciences," which in medical education are called the "basic sciences."[18] The skills of application —applying principles and understandings to the solution of practical problems—are largely to be learned in practice, although they can be explored during the school experience and further developed through supervised clinical internships. This three-way division of educational labor—among college, professional school, and practice— provides a useful guideline for curriculum-makers and encourages cooperation by the professional schools with the colleges (in the formation of stable knowledge structures in the basic disciplines) and with practitioners (in promoting experience as a way of learning).

While educational theory has largely been applied to elementary and secondary education (higher education generally excusing itself from its own doctrine), professional education has not been unaffected by its schools and trends. "Traditionalists . . . taught the time-honored subjects as anthologies of separate topics, with the hope that the bits and pieces of information would somehow or other turn out to be useful in the lives of their students";[19] and in this spirit the traditional library schools presented cataloging rules, reference works, and book selection, each of them apart, just as the lower schools did arithmetic, geography, and spelling. In the 1930s and 1940s the progressive reformers (under the spell of another redoubtable Dewey) began to focus instead upon the personal and social problems of students, drawing upon the academic disciplines as they became relevant. This trend got to the library schools slowly—in attempts to

anticipate for the student some of the problems of the community he might one day encounter, in exposing him to the case method and role-playing as vicarious experience (and to liven up otherwise tedious material), in appropriating principles from public administration to formalize patterns of action, in encouraging informal "seminar" relationships, and in permitting the development of "problem" courses around individual student interests. Today the newest emphasis in curriculum theory is upon the logical order which is inherent in knowledge itself, the structure of concepts and the principles of inquiry which characterize the various fields of learning and are used by scholars as intellectual tools to analyze and organize their data. Some library schools are responding to this move toward structural organization in fragmented attempts to introduce concepts such as systems analysis, search strategy, and the role of objectives, but we are far in the wake of the radical changes which are shaking up educational practice elsewhere. We have all heard about the "new mathematics" but nothing about a rebirth of library science. The immediate problem of the library schools seems to be to realize that such radical changes are possible.

In the context of what has gone before, I can conceive of a curriculum in which the initial approach would be based upon historical principles—using history (as proposed by William Appleman Williams)[20] as a "way of learning." At the start it would present an initial pattern of general concepts, principles, and problems (combined with the basic terminology, elemental facts, and conventions of the field) by revealing what earlier points of view, values, and conditions have been in respect to the transfer of recorded information; what alternatives have been available to library people and what their major decisions were; which of our current concepts and practices represent a past rather than a present-day perspective; and what the problem areas and opportunities of library service are now. This might be followed by identifying and exploring the concepts and methods offered by the several disciplines which are relevant to the library condition and trying them out on samples of the library field's content with which the student has now acquired some initial familiarity.

In this way, the fundamental areas of scholarly study, ranging through philosophy and information science, sociology, public administration, mathematics, bibliography and literature, to name a few, could be introduced and fused. This could lead to a more sophisticated and detailed study of some of the major problems of the modern library in providing services to its range of communities, calling upon both the scholarly and the professional disciplines (law, public administration, education), and organizing the presentation around the "great principles," methods, and concepts which give structure to the library field. Theory is essential to structure and

analysis, but the hazards in its exclusive use arise from its remoteness from experience; therefore, some participation or observation in real situations might well be introduced at this stage.

This much of the program might compose the "core"—those aspects of theory and practice which all libraries have in common—and more specialized work might follow, involving an expanded use of analysis, evaluation, and problem-solving in a variety of areas, none of which would be approached from the viewpoint of a single discipline. Attention could be paid to the need for particularized knowledge, viewpoints, and skills, comparable to surgery in medicine, teaching methodology in education, and the preparation of prescriptions in pharmacy; these might include work in "question negotiation" in the reference process, in computer technology in library operations, in abstracting and indexing, in research, in field studies, and so forth. I have not divided the program into courses, discussed teaching methods, or specified the faculty components; whether professional education as described would require two, three, or four semesters still remains to be explored. Potential course offerings from other areas of the university should be focused upon one of the advanced problems and not be general or vaguely cultural in character—that is, general education should be prerequisite, prescribed, or voluntary outside the basic professional sciences, and the influence of the other university disciplines should pervade the entire enterprise.

There is a conflict in professional education over whether it should be "liberal" or "special." A *librarian* must possess a breadth of understanding which will enable him to discover the complex library needs of a mixed community; his primary concern is with the social effects of the institution, what happens outside as a result of actions inside. A *technical worker*, in contrast, must be able to control the apparatus of the library in order to effectively realize its purpose. *Clerks* and *operators* must have skills to perform particular jobs. "Specialist education seeks to transfer a special knowledge or skill," and though "it produces the necessary cogs and wheels in the social machine, [it] disintegrates . . . the mental powers for understanding the human situation which has to be mastered." If a teacher is nothing but a specialist, "he cannot really understand his own subject," let alone teach it, "because it cannot be understood except in relation to the others."[21]

If, as has been stated, it is the university's responsibility to "face the great problems of modern man"[22] (though not necessarily to solve them), it is the responsibility of the university library school to face them under the aspect of librarianship. A graduate school of a university (according to a statement from the University of California) should offer "professionally oriented curricula in subject areas which are intellectually substantial, worthy of graduate study and

research . . . of broad public value and concern . . . [and] emphasize
not routine procedures but basic knowledge, scholarship, and re-
search,"[23] such preparation to be directed toward the student's total
future career rather than toward his first job. Professional education
ought then to be "special" only in its attempt to make a coherent
system of its aspect of the universe. It has its own points of view,
objectives, organizing principles, and methodologies; its success as a
profession will depend upon how well these are developed and applied.
While the individual librarian will practice within finite bounds, that
is, he will, in the common idiom "specialize," he will do so within
the range of knowledge and responsibility which distinguishes his
profession. "The specialties have to develop in the context of one
another."[24]

THE "FIELD"

In an earlier article, I have suggested the appropriateness of
applying "field theory" (borrowed from physics) to librarianship.[25]
The purpose of that earlier article was both to introduce an alien
point of view into curriculum development and to emphasize that
librarians are not quite alone in the universe. According to field
theory, all events in nature occur within some unified field, large or
small, and the structure and properties of the field as a whole explain
local phenomena. Library systems, like solar systems, are examples
of such organization and of the regulation of actions by the total
structure. Not only does the library field embrace all of the relevant
disciplines (as indicated earlier), but, like every other profession, it
practices in an elaborate social system which it can ignore only at its
peril. Libraries cannot function usefully in a system of which they
are unaware; their services will be irrelevant and ineffectual if
carried on in isolation—as social institutions they will not work. The
search for objectives and for solutions to problems must therefore
start with the situation as a whole rather than with any of its more
pressing or troublesome parts. The library is itself composed of a
number of subsystems, concerned with the acquisition and organiza-
tion of information, the interface between the record and the user,
retrieval and dissemination, and feedback and evaluation. The struc-
ture of the system—its framework, composition, and nature—is the
process of communication which interacts at every level of operation.
    The implications of field theory for curriculum are all-pervading
and will tax the capabilities of any curriculum-maker and teacher.
Achieving a unified approach means that no fragment can be taught in
isolation from other content, from its intellectual and social setting,
or from the individual student. The library as a social agency cannot
be regarded as separate from other agencies in education, health,
welfare, law, commerce, amusement, and religion. The field cannot

be divided between library science and information science, processing and public service, cataloging and reference. Librarians cannot react bit-by-bit to individual demands made upon them but only in response to the needs of the system. Field theory envisages the library in a seamless environment in which it must take an active and material role.

THEORY AND PRACTICE

In such a universal and fluid setting no one can provide a handbook or rules of practice to guide the individual through a lifetime of professional experience. "If you are going to teach a student how to do it, you have to know how it is going to be done"[26]—and the future will likely be not only "queerer than we imagined" but queerer than we can imagine. Whether we should teach theory or practice is an argument of some antiquity, going back at least to Plato (who favored theoretical knowledge, at least for people over thirty). Theory and practice are variously related in the several disciplines, some of them being highly metaphorical, others abstract, still others as yet experimental and hypothetical; and practice can thus serve to interpret theory, supplement it, or become the object of theoretical study.[27] No knowledge has a perpetual guarantee, but theory has the greatest staying power, and the "broader it is, the greater the chances that it will prove useful in practice because it will be applicable to a wide range of conditions."[28] Although the purpose of the professional sciences is to predict or influence performance, educators must not become hung up on practice—seeking practical ways to teach practice to practitioners—but must concentrate upon order and structure (the principles which govern practice), upon making theoretical assumptions concerning the raw problems of the field, and upon finding experimental means of putting them to the test. In librarianship we tread upon a superficially familiar but highly unknown terrain which is wide open to exploration, with a multitude of theoretical approaches which can be taken.

Perhaps we most need to develop an area of study within the field of librarianship which is analogous to *jurisprudence* in the law—to be concerned with the nature of library service, its purposes, the institutional and conceptual means necessary to achieve these purposes, the limits of its efficacy, its relation to communication, knowledge, and human welfare, and the modes by which such service changes and grows historically.[29] "A learned profession is one based on a great intellectual discipline. It has intellectual content and it has it in its own right. A learned profession has something of its own that it can bring to the task of . . . [completing] the circle of knowledge and facing the great problems of modern man."[30] What librarianship can bring to the common task is the foresight, understanding, and

program which can be generated through a science and philosophy of library service—a library *prudens* or science of communicating the content of the human record. Such a knowledge base, dedicated to human welfare, would provide the essential theoretical and, therefore, working structure for professional education and practice.

ARGUMENT FOR CHANGE

Everyone is uncomfortable in the presence of change which affects him; what gives pleasure is something with which we have learned to agree. Some changes appear to be more threatening than others, depending upon the individual's existing commitments or his readiness to learn. To the well-rooted individual all change seems chaotic since it does not fit into any pattern he knows. Change, however, has a long clinical record and has been regarded by some philosophers as being the only permanent matter. Certainly it is now at a high pitch, and adjusting to it is a capability essential to survival.

Accepting that change is constantly taking place in the information base at society's disposal, in the informational needs of individuals and organizations, and in the potential for organizing and disseminating informational resources, it then seems unlikely that any parts of a curriculum which are a generation old can have current validity. Yet, upon close scrutiny, the curricula of library schools look very much like those upon which the faculty themselves were raised. A few new dishes have been added to liven up the old menu, but for the most part the same subject divisions, courses, and approaches persist which have been familiar throughout the lifetimes of all of us.

Why is the rate of change in the schools slower than it is on the outside? For one thing, change in the general society needs not wait for one generation to succeed another; all ages and groups exist together, and, as their interests conflict with those of the establishment, pressures are exerted toward adjustment. In contrast, the schools have long been the sole province of the incumbent faculty, with a separate and unequal body of students often able to evade but not to influence policy and program. A function of academic freedom has been to preserve the establishment against encroachment; a function of faculty tenure has been to fix its members in their positions until they are ready to move or quit. With the increase in the number of library school faculty being slower than the growth of the population, the status quo has been less often challenged, since, over the years, there is more chance that one person will be resistent to change than will two in succession. Not every faculty member, moreover, is recruited at the beginning level, some being brought in after a lifetime of practical experience with few remaining intellectual options. Too often, criteria for the selection of faculty may have emphasized compatibility rather than original (and sometimes divergent)

performance. Being oriented more toward empirical than theoretical knowledge, faculty have been ill-prepared to take advantage of the intellectual relationships available to them in other departments. They have likewise been inclined to shy away from technology. Burdened with teaching what is known, they have been indifferent to their responsibility within the university for new knowledge and have little experience in research, or think of it in terms of narrative history, surveys, or bibliographic compendia. Practitioners in library schools, therefore, like practitioners in libraries, have tended to be conservative, that is, moderate, stable, and limited; and the weight of their influence has been on the side of continuity.

The first move toward changing the curriculum is therefore to recognize the need for it, not for adding a few courses or dropping some, juggling content, or making any other similar little moves in the right direction. "As change progresses there can come a point (sometimes quite a sharp one) where our view of it must change, where a difference in degree suddenly becomes the equivalent of a difference in kind."[31] At such a point, at what is called a "phase change," nothing but a drastic, radical break in the continuum will suffice. Reaching such a decision may be the hardest and most important move to make.

Among the common barriers to change are complacency, inertia, lack of time, energy and money, intolerance of "radical" ideas, suspicion among teachers and administrators, lack of leadership, inadequate knowledge of theory, ignorance of outside developments, and (one of the great hazards of advancing age) an "unwillingness to accept change without bitterness."[32] Outsiders have recently charged librarians with both cowardice and neglect. And a "really heartless critic might say that our present curriculum is misinforming our students about the past, adding to their ignorance of the present, and denying them decent preparation in fundamentals for the future."[33] But, remembering André Maurois's dictum that "Everything can be said with good grace, and it would indeed be a mistake to take brutality as the only form of candor,"[34] I say no more.

What is the social, intellectual, and technological context of library service, and how do we develop a profession within it? Can information be harnessed? Can it be controlled in the framework of a democracy? Can it become truly international? What is the meaning for librarians of a communications system that will "bring into our homes the accumulated wisdom and folly of the race at the push of a button"?[35] How do libraries fit into the world of television, video cassettes, computers, paperbacks, and all their technological successors?

Recognizing that knowledge is power for human beings at all social levels, can libraries participate functionally in community action?

Can they "enter into the lives and relate to the values of the whole of the population that has heretofore lived beyond their scope"?[36] Can the library be the "handy, handy, handy, handy, handy thing"[37] acclaimed in the *Whole Earth Catalog*? Can it become the open means of communicating information directly to individuals without the restraints and abrogations imposed by the requirements of licensing, large capital investment, bureaucracy, and profit-taking? Can it be the door to self-realization within the system of obligatory mass education? Can the library be transformed "from an institution with rather general educational, cultural and recreational aims, functioning . . . somewhat on the margins of our cultural concerns . . . [to] become a part of our essential machinery for dealing with these concerns"?[38]

Within the library, how do we protect the rights, influence, professional role, and public responsibility of librarians against the bureaucratic restraints of the organization? Will librarians join the "New Professionals: the young lawyers, physicians, urban planners, and consumer protectors who are . . . resolving to use their Establishment-sanctioned skills in behalf of the 'public good'"?[39] Or, lacking a clear professional affirmation, will we go ahead as if libraries were supposed to accommodate books and (as has been said of Chicago's famed O'Hare Airport) to be defiant of people and their needs? Do we as educators have the insight and then the courage and strength to attempt to change the nature of the social institution called the library by changing the behavior of librarians?

Whether or not the library schools face the problems of our time, our students are going to have to. If the schools do not face them, the students may look back upon their professional education as an experience that failed to make intelligible either the library in theory or the library in action, and did not indicate what might be expected of them as communicators of knowledge and members of a profession.

What I propose for library school curricula at this time is a great rending earthquake rather than a bit of adjustment along the old line. Discrepancies between past and present which have built up since the 1890s have produced intolerable tensions, and we are in for a big slide, creating new mountains and valleys, changed landmarks and shorelines, and quite a bit of rubble. The break between past and present will always remain as a warning and promise that, if we can competently engineer future adjustments, repeated apocalyptic changes can be avoided.

But now, having little "designs on the curriculum" will no longer do. The revolution is upon us, Samson, arise and pull down the house!

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THE CURRICULUM OF LIBRARY SCHOOLS TODAY:
A HISTORICAL OVERVIEW

As background for a review of curriculum development, this paper gives a brief summary of the history of American library education: the *pre-Dui (Dewey) years*—apprenticeship and in-service library training classes designed to improve local services; *1887*—Dewey and his rationalization leading to a common avenue of library training and his Columbia School of Library Economy; *1923*—Williamson, the ALA Board of Education for Librarianship, and initial accreditation of professional library education; *1933*—the clarion call to respectability sounded by the 1933 standards; *1947/48*—Denver, Chicago, Columbia—all this and a master's degree too; *1951*—the unveiling of the new qualitative standards calling for sound general education, introductory professional courses, and initiation into an area of library specialization; and finally *1970*—a library education curriculum still with challenges for change impinging from every direction.

PRE-DUI

In the early schools the curricula stressed cataloging, classification (according to Dewey), library techniques including the library hand, and an extensive practicum frequently reported to have been of more benefit to the library served than to the student. Much credit for early library school development must go to Melvil Dewey, but tribute must be paid also to his acolytes, e.g., Mary Wright Plummer at Pratt, Alice B. Kroeger at Drexel, and Katherine L. Sharp at Armour Institute. These pioneer educators left their impression not only upon professional library education, but also upon librarianship generally. They attempted to give their students sufficiently specific suggestions on each of the hundreds of questions that they faced from time to time in the libraries in which they were working to enable them eventually to put the library for which they would have responsibility into perfect working order.

DEWEY

The four qualifications which, according to his *Circular* of 1886-87, Dewey viewed as proper professional preparation are as follow: "(1) a college course; (2) the three months' course as designed for the Columbia College School of Library Economy; (3) the completion of one or two years' actual experience in various kinds of library work; (4) a return to the Columbia College School for the three months' course taken again in review."[1] Faithful though they were, I have found no record of any of Dewey's protégés returning after two years to repeat the initial course.

In 1887 the program at Columbia consisted of lectures late in the afternoon twice a week followed by discussions of what students were doing in their various libraries. The following year Dewey added an eight-week term in preparatory cataloging and classification. In anticipation of moving the school to Albany, he outlined the first year of his two-year program as follows:

> Junior year. Cataloging, shelf listing, accessioning and elementary library economy . . . October to Christmas; dictionary cataloging in January; classification in February; library economy, March and April; apprenticeship work in the State Library and visits to other libraries, May and June; vacation, July through September. In the first five months, students were to receive one lecture a day; in March and April, three lectures a day. The rest of the student's time during these seven months was given over to work under supervision of members of the library staff who had responsibility for instruction.[2]

The curriculum for the senior year was more of the same. In the next several years new courses such as reference, book selection, and the history of books and libraries began to appear.

Offered as late as 1901 for two years of college work and two years of technical work in library economy, the B.L.S., established by the regents of the University of the State of New York in 1889, stood primarily for the two years of specialized study. The thesis requirement was soon deferred to the M.L.S., awarded to those who in addition to holding the lower degree had completed at least five years of professional work and presented a satisfactory thesis, bibliography, or catalog.[3]

Sydney B. Mitchell wrote a delightful article entitled "The Pioneer Library School in Middle Age," with frank comments based on his sojourn at the New York State Library School in 1903. Stressing the physical isolation of the school at Albany, Mitchell observed:

> I know that most of the men students missed the critical attitude, the exchange of ideas with students of other interests, the presence of other professional schools, which might in some degree

have mitigated the narrow focusing of our interests in a single field.

What was worse was that our instructors were in the same state of isolation and removed from the broadening influence of university association. Had Dewey stayed at Columbia long enough to have insured the continuance of the library school that he had established there and then turned it over to others to develop along professional school lines, the early history of American education for librarianship might have been very different. I have no quarrel with him for taking the young school with him to Albany, as it would almost certainly have died at Columbia without his care, but it was nevertheless regrettable. In its isolation it became too much like the theological seminary of a fundamentalist church. Library truth was considered to have been established and the appropriate dogma to implement its findings, even the detailed ceremonials and procedures, laid down and no longer open to criticism. I felt that we were there for indoctrination and the later propagation of the library faith. Much of the school's influence was good, but even what was not so good was carried from the motherhouse to new schools . . . . These new schools were dutiful daughters, never rebellious, and even in the rare instances when they were incorporated in universities they tended to remain aloof, without intellectual or curricular integration, left alone and little considered, suffered as children of good librarians but hardly considered members of the university family.[4]

. . . .

An illuminating episode occurred to me in 1908 when, under appointment to go to Stanford University, I was filling in time by teaching my last summer-school library classes at McGill. I had taken Harriet Peck, the instructor in cataloging, canoeing on the near-by Rivière des Prairies, and we got to talking of the Albany of our days. She told me an extraordinary story: that our trio, Avery, Goodwin, and myself, were reported at Albany to be heavy drinkers, dangerous persons to have around. In the school year that we lived together, I am quite sure, none of us ever had a drink, to say nothing of getting drunk. True, we howled drinking songs in the rickety old elevator which took us aloft after dinner, when we often returned to the school quarters, but any man would know that these were mere manifestations of youth, gone, alas, too soon. But I think I learned something from this, and, when it later fell to me to do much placement work, I tried to be as fair as in me lay, even with students whose ways were not my ways. I believe that the function of professional schools is not to turn out graduates in the image of their makers but, rather, to encourage that variety and vigor which means life.[5]

WILLIAMSON

Now for the Williamson era of the 1920s. In summarizing the findings of his 1920-21 Carnegie survey of library schools, Charles C. Williamson reported:

1. There is little agreement among the schools as to the relative importance of the different subjects in the curriculum. About half the student's time is devoted to four subjects—cataloguing, book selection, reference work, and classification. But even to these major subjects some schools give two or three times as many hours of instruction as others do.

. . . .

2. . . . The content of the curriculum . . . should be determined by first-hand acquaintance with the most progressive library service rather than by tradition and imitation.

. . . .

4. A composite statement of the scope and content of the twenty-five or more distinct subjects included in the curricula of the library schools reveals (a) the difficulty of providing thorough instruction and training in the whole field of library work in one year, and (b) the necessity of a broad, general education of collegiate grade as a basis for library school instruction.

. . . .

4. (d) To develop the type of specialized training recommended, a library school must be so situated that it can coöperate with other educational institutions, such as schools of education, schools of business, etc.[6]

During the first twenty-five years of this century it seems clear that the character of library school curricula was influenced substantially by the pragmatic approaches of practitioners. Many library schools originated in libraries, and even those located in universities existed in splendid isolation rather than entering into the main stream of university life; many courses were taught on a part-time basis by retired or surplus librarians; a large share of the student's time was spent in field work, often never evaluated by librarian or library educator; and the status quo syndrome prevailed.

With the limited resources available to library schools as recently as 1960, it would be unrealistic to expect the methods of instruction and the conditions of employment to be other than those which Williamson and other early surveyors did in fact find, viz., excessive dependence upon the lecture method, few if any teaching materials, little or no clerical assistance, low salaries, and meager faculty qualifications. This is hardly the stuff of which significant, scintillating teaching is made.

W. W. CHARTERS AND THE ALA LIBRARY
CURRICULUM STUDIES

Fully aware of the shortcomings of library school curricula, the Board of Education for Librarianship (B.E.L.) had recorded in its "First Annual Report" the need for a scientific analysis of library work as a basis for sound curriculum development and announced that, as soon as the money was forthcoming, W. W. Charters, a University of Chicago School of Education specialist in teaching methods and curriculum, would direct such a study and develop a series of textbooks for use in library schools.[7]

By the following year Charters had established a study headquarters in Chicago and secured as his assistants two able young librarians, Anita M. Hostetter and Harold Brigham. Margaret Mann had begun work on her text on cataloging and classification; Jennie Flexner was moving ahead rapidly with her book on circulation work. Both texts were ready to be tried out by library school faculties and students in the 1926-27 academic year, and others in the series were already underway.[8]

Preliminary to the writing of each volume in the ALA series of library curriculum studies, under the guidance of an advisory committee, staff members made a detailed analysis of the duties and traits of workers in the respective field, did a thorough literature search, and visited at least fifty selected libraries. Once the draft was in mimeographed form, it was tested in library school classes and submitted to at least twenty-five experts in the field for criticism. By the time the final revision was ready, at least two hundred people had contributed to its preparation. Charters concluded an informal report on the 1925-26 studies with the remark that "This so-called job analysis is not a mystery. It is just common sense."[9]

The Charters curriculum studies were highwater marks for library education. They focused national attention on library education, involved most library leaders in one way or another, provided a unique learning experience for a corps of promising young librarians, and produced the only comprehensive set of texts on this continent designed for use in library schools.

In passing, I would like to note the appearance in 1968 of the first volume of the attractive McGraw-Hill series in library education, for which Jean Key Gates is the consulting editor. Like the earlier ALA series, McGraw-Hill has sought the help of library leaders to identify possible authors and to assist with the final revisions of these texts.

B.E.L.—1926

"The Second Annual Report of the Board of Education for Librarianship" issued in 1926—the fiftieth anniversary year of the

association's founding—endorsed the recommendations made by several other ALA committees, urging greater emphasis on rural library extension, rural conditions and social agencies; special instruction in adult education and libraries; more attention to preparing children's librarians for work with children and young people; and advanced study and investigation to be carried on in the graduate schools.[10]

In this same report the board suggested a curriculum of twelve to fifteen semester hours, which included the following:

Book selection and allied topics
Children's literature (for the general worker)
Reference and bibliography
Cataloging, classification, subject headings, etc.
History and administration of libraries
Field work, observation and visits
Library work as a profession

Suggested electives dealt, for the most part, with the type of library administration and management.[11]

CHICAGO GRADUATE LIBRARY SCHOOL—1928

In the late 1920s, Carnegie money, once again made available through the kind offices of Robert M. Lester and other Carnegie Corporation people like him, resulted in the establishment of the Graduate Library School (GLS) at the University of Chicago. This "blessed event" resembled somewhat the birth of a lusty new infant to a pair of uncertain parents—the staid middle-aged professional association and the much younger handmaiden, education for librarianship. A few people of the ilk of Robert Lester were thus instrumental in elevating education for librarianship from the technical to the professional level. They believed in the importance of libraries and recognized that, if libraries were to be strong, library education must be even stronger.

Founded by a group of pioneering scholars representing a variety of disciplines and thoroughly at home in the university community, this new school was dedicated from the beginning to rigorous scientific study of every aspect of librarianship, to experimentation, and to publication. With its fresh perspective, this faculty was indeed "a company of scholars with students in attendance."[12]

Such was the milieu out of which evolved the *Library Quarterly*, a scholarly journal deserving of the University of Chicago's prestigious imprint; a series of distinguished annual conferences, which inspired excellent papers and provided a much needed forum for practitioners and educators; the first doctoral program in library science; and a new generation of lively library school deans and library

administrators, who spread the GLS doctrine of librarianship from coast to coast.

1933 STANDARDS

Out of the ferment and activity of the 1930s and 1940s emerged a number of major library education conferences, surveys, and reports —all of which helped to pave the way for changing library school curricula. In 1933, the year in which new library education standards were adopted and implemented, members of the B.E.L. were William Warner Bishop, Harold F. Brigham, Joseph L. Wheeler, Eleanor M. Witmer, James I. Wyer as chairman, and Anita M. Hostetter, who served with distinction as the secretary of the B.E.L. until her retirement in 1955.

In a report entitled "Education for Librarianship in the Future" this board issued the following challenge:

What society expects of the librarian today and what it is likely to expect ten years hence are touchstones by which the success of professional education may be tested. As for other professions, the most effective training for librarianship is that which is designed not primarily to give instruction in established practices, but to stimulate in the librarian of the future the ability to recognize opportunities for service, to adapt accepted methods, and to devise new procedures and organization in relation to changing social and educational needs. More than the librarian of the past, must the librarian of tomorrow understand the political, economic, social, and educational forces which condition his service. He must be even more alert to interpret the service of his own library as a component part of the larger library movement which seeks to advance higher cultural and educational interests. The future welfare and progress of librarianship will depend in no small measure upon the successful alignment of the library with other agencies working toward the solution of problems which confront a shifting world. There will be a general professional desire to seek counsel and to learn new methods from those who are working in other fields.[13]

REECE CURRICULUM STUDY

In 1936 Ernest J. Reece, Melvil Dewey Professor at Columbia University and one of the Carnegie Foundation library education pacesetters, wrote that there were "elements of homogeneity, if not of unity, in library work, since its differences are largely in application."[14] He indicated a need for analysis, evaluation, and synthesis to secure "a more unified and reasoned conception" of the meaning underlying the librarian's tasks.[15] In dealing with curriculum,

Reece's procedure was "to schematize library work under its major headings, then to subdivide these and to extract and array the elements" for presentation to students. The four areas of library work from which Reece derived his scheme or core were "Fashioning a library collection," "Organizing and caring for a library collection," "Using a library collection," and "Directing a library enterprise."[16]

DENVER, CHICAGO, COLUMBIA

One of the earliest of the experimental programs was introduced in 1947 at the University of Denver School of Librarianship under the direction of Harriet Howe, an intelligent woman with an enviable record behind her. In the decade just prior to going to Denver, Howe had worked at Columbia under James I. Wyer, whose brother, Malcom G. Wyer, was Howe's predecessor at Denver as director of the School of Librarianship, a post which he held in addition to being librarian of the Denver Public Library. At ALA headquarters she came under the tutelage of such people as Carl Milam, Sarah C. N. Bogle, and W. W. Charters. Her appointment as associate professor at Chicago in the pre-Wilson era gave her the opportunity of working with such men as Pierce Butler, J. C. M. Hanson, and Douglas Waples.

In the Denver program, professional courses prerequisite to the graduate program but also preparatory for certain types of library positions were open to undergraduate seniors; the fifth-year program led to the master's degree; courses such as the book arts series combined selection and use of library materials; and special units given by other university departments, e.g., industrial relations, statistics, and the bureau of personnel, were introduced into such courses as library administration and research methods.[17]

In the curriculum of its new master's program, Chicago went a step farther than Denver and integrated bibliography, reference, selection, cataloging, and classification into a series of materials courses entitled "Interpretation, Evaluation, and Use of Library Materials." These together with the following three courses comprised Chicago's influential core curriculum: "The Library and Society," "Communication and Libraries," and "The History of the Public Diffusion of Knowledge and Ideas." One of the Chicago innovations which is sound in principle but often difficult to implement is the pattern of the three-year professional program starting at the junior undergraduate year, or upon passing the university's general education and entrance examinations. This program has three phases: the core curriculum, a specialization within librarianship, and study in a related subject field.[18]

The new Columbia program centered around broad areas of study, e.g., foundations, resources, and methods. Although Columbia accepted the concept of the master's degree as the first professional

degree in librarianship, it held strongly to the philosophy that librarianship is superimposed upon a knowledge of the literature and bibliography of all the disciplines and that therefore the sound study of the liberal arts at the undergraduate level is the best preparation possible for librarianship.[19] Hence it held firmly to deferring professional library education until the post-baccalaureate year of study.

By the fall of 1948, nine library schools were offering experimental programs leading to master's degrees in library science. This is the year too in which the word "articulation" came to be used frequently to indicate the need for a smooth transition from prerequisite undergraduate to post-baccalaureate library science courses. In her report for 1947-48, Anita M. Hostetter, by that time B.E.L. Secretary and chief of the ALA Department of Library Education and Personnel, wrote: "Already in the library profession the idea is breaking down that liberal education and professional education are widely separated and distinct. The new programs stress the importance of integrating these two broad areas of education as a means of enriching each through the other."[20] And again she encouraged the schools to continue to experiment with new patterns of professional education.

ROBERT D. LEIGH AND THE PUBLIC LIBRARY INQUIRY

In his study of library education in conjunction with the Public Library Inquiry of the late 1940s, Leigh surveyed eighteen undergraduate library science programs, nineteen B.L.S. programs, twelve M.L.S. programs, four doctoral programs and took cognizance of what was happening in the 135 unaccredited library training programs.[21]

Despite obvious disparities created by the coexistence of old and new, graduate and undergraduate, accredited and unaccredited programs, Leigh found that the following core courses were required universally: reference and bibliography, cataloging and classification, and book selection. Library administration and the history of books and libraries were offered generally but not universally. Leigh also identified four other common fields of study: communication and social orientation, reading guidance, type of library course, and, in schools with programs of advanced study, research methods.[22]

CHICAGO WORKSHOP ON THE CORE CURRICULUM

In 1953 the Graduate Library School of the University of Chicago sponsored an invitational workshop for practitioners and educators, and charged them with deciding whether the core concept was still viable. "In other words, are all aspects of library practice truly and distinctively part of a separate professional discipline, or is some

librarianship dependent upon the professional content of one or more other disciplines for which it performs a service function?"[23]

Workshop participants reaffirmed the core concept and listed the following areas which they felt should be included in the basic program:

  1. The study of the library and of society and their relationship to each other.

  2. The meaning and characteristics of professionalism.

  3. The interpretation, appreciation, evaluation, selection and use of books, materials, and sources.

  4. The organization and characteristics of internal and external library services in relation to the users of the services.

  5. The basic principles and various patterns of library organization and management.

  6. An introduction to the characteristics and functions of the communication process throughout history and in the present.

  7. An introduction to the functions and methods of research, and the use of research findings.[24]

Although avoiding any tendency toward encouraging standardization, the participants did recommend that practice work not be included as a part of the basic curriculum and encouraged use of the historical approach. While this conference dealt with already recognizable trends, the formulation of these ideas and their reinforcement through discussion had a lasting impact.

ADVANCED LIBRARY SCIENCE PROGRAMS

In 1965 Raynard C. Swank of the University of California School of Librarianship voiced what many educators had often felt, that in the shift to the fifth-year M.L.S. degree program, the intermediate specialized degree afforded by the earlier degree structure (B.L.S., M.L.S., Ph.D.) had been lost.[25] He pointed out, too, the emergence of new specializations and new functions requiring even greater specialization, and commended those schools which were even then developing sixth-year certificate programs.

In 1965 also, Guy Marco of Kent State University School of Library Science surveyed the seven doctoral programs then in existence.[26] His report, indicating greater diversity than at other levels, still holds true.

In 1968, Margaret E. Monroe, director of the University of Wisconsin Library School, discussed three major elements of doctoral program content: comprehensive knowledge of librarianship, specialization, and research competence. She concluded: "Degrees granted by library schools have, since the program's incorporation into graduate schools throughout the country, tended to take their patterns from the home institutions rather than from the professional pattern.

To the extent that the Association of American Library Schools can provide leadership, this matter of clearly developed degree structure and program formulation at the master's, specialist, and doctoral levels should become its task."[27]

If to date seventeen library schools have developed doctoral programs, it is fairly certain that there are more than seventeen patterns, for some schools offer both the research degree and the professional degree, and no two are identical. The advantages of diversity are flexibility, which permits tailoring of programs to the individual student's educational objectives, and the opportunity for maximum utilization of course offerings in related fields. The danger lies in proliferation of doctorates before the respective school has the resources to support "honest doctoral programs."[28]

CURRICULA IN FIFTY ALA ACCREDITED LIBRARY SCHOOLS

The most recent bulletins available from fifty of the fifty-two ALA accredited library schools were examined to determine the general pattern of current curricula, core courses, and elective offerings. The two schools from which bulletins were not available are Queens and San Jose.

Two departures from the general tendency affect reporting:

1) Several schools are endeavoring to achieve flexibility in their programs by tailoring each student's program individually rather than by indicating course requirements. By using guidance and course prerequisites, the end result may not be too different, but it does mean that all of the courses of such a program appear as electives. The technique used by these schools is to require that students elect a certain number of courses or course hours from each of several blocks of courses, e.g., from the professional core or from courses within a designated range of course numberings.

2) A second departure is the integration of two or more course areas. One of the first efforts to realign core courses was Chicago's sequence of courses entitled "Interpretation, Evaluation, and Use of Library Materials." The University of Western Ontario uses a similar subject field approach. Pittsburgh and Toronto have combined collection building and use into single courses.

The most recent complete revamping of the entire group of introductory professional courses is Case Western Reserve University's telescoped six-hour prerequisite course, "Foundations of Library Science."[29]

Minnesota's "Library Mechanization and Systems Analysis" is an example of numerous new double-barreled course offerings. In Table 1 below, such a course has been listed in the subject area in which the major content seems to fall under the heading, "Content included in other courses."

TABLE 1

DISTRIBUTION OF CORE COURSES BY NUMBER AND PERCENT OF SCHOOLS

Subject Area	Required Courses	Elective Courses	Content Included in Other Courses	Schools Offering Courses	
				Number	Percent
Reference and bibliography	42	5	3	50	100
Cataloging and classification	42	4	4	50	100
Selection and acquisition	32	10	4	46	92
Introduction to librarianship; library in society	26	11	3	40	80
Administration, management, and systems analysis	24	3	23	50	100
Research methods	14	29	0	43	86
History of books and libraries	9	35	4	48	96
Information science	8	36	6	50	100
Communication and libraries	4	18	0	22	44
Seminar: issues and trends	3	30	4	37	74

Quite possibly other schools will experiment in these or in other ways in order to retain flexibility of programming at the same time that they face an increase in the number of subjects to be taught.

CURRICULUM DESIGN

In programs leading to the first professional degree, each of the fifty schools has a core of introductory professional courses based upon knowledge it considers to be common to all librarians. It also offers courses which afford opportunity for specialization in the various types of library service and in the functions within these services.

About one-fourth of the schools require from six to twelve semester hours of prerequisite preparation; another one-fourth make courses available to undergraduates.

The range in the number of required courses is from zero to eleven, with a median of six. The number of elective courses varies from fourteen to sixty-four, with a median of thirty-seven. Only nine schools actually require students to register for courses in outside fields, but twice that number urge their students to do so, particularly when a student has an undergraduate minor in library science.

Most schools follow the system of "required electives" in regard to courses dealing with the bibliography and literature of the fields of knowledge and with types of library administration.

Seven schools require field work, at least for students with no library experience; another nine offer it as an elective. Most schools include some form of practicum in their school library specialization programs for those students who have never worked in a school library.

Six schools offer an orientation program; twenty-one schedule weekly colloquia intended to extend students' knowledge of librarianship and related fields and to hear and meet distinguished leaders from these fields. Other schools schedule weekly lectures which are an integral part of the curriculum. During its first term, British Columbia, for example, uses this means of introducing the subject of automation and libraries. A number of other schools have well established annual lecture series. Some have regular coffee hours at which time visitors to the school are introduced.

According to the chart on the verso of the Committee on Accreditation's most recent listing of "Graduate Library School Programs Accredited by the American Library Association," February 1970, seventeen schools offer doctoral programs. A perusal of bulletins indicates that fourteen list advanced sixth-year certificate programs, sixteen offer other special programs, e.g., Case Western Reserve's program in medical librarianship and health science information, Chicago's joint program with the Graduate School of Business, North

Carolina's rare books specialization, and Wisconsin's master's degree in library science combined with area studies.

CANADA'S TWO-YEAR MASTER'S PROGRAM

Brian Land of Toronto recently reviewed the pattern of library education in Canada where the academic structure is two years of study for the master's degree in fields in which there is no substantial undergraduate base. In 1964 McGill instituted a two-year M.L.S. as its first professional degree. In 1967 the University of Western Ontario began a three-semester program leading to the M.L.S. degree. "By the spring of 1968, there were seven library schools in Canada with four distinct degree structures."[30]

At a meeting of library school deans and directors sponsored by Toronto in 1968, a resolution, endorsing the principle of a four-term graduate program leading to a master's degree in library science as the first professional degree, was passed and is to be implemented by 1973.

After many soul-searching sessions using both historical analysis and "analysis of performance capabilities of librarians," the Toronto faculty evolved a curriculum designed to achieve the following aim:

> The ultimate goal of education for librarianship should be to educate students who are able to think and act upon the issues presented to them as administrators, planners or practitioners. The emphasis of the education should be intellectual and theoretical so that librarians can think creatively about whatever area of librarianship they may be concerned with. Because of the continual change in the nature of libraries and librarianship, it is not possible for library educators to foresee all the needs of the future. Therefore, they should endeavour to educate librarians who can analyse problems and then work out their own solutions. Library education should provide a methodology which will enable librarians to function effectively in any professional situation."[30]

Toronto's five required courses are "The Social Environment and Libraries," "Information Resources and Library Collections," "Organization of Information," "Library Administration," and "Research Methods." Sixty elective courses provide ample opportunity for specialization. An orientation period and a non-credit exercise in writing a computer program round out the program.

The University of Western Ontario's experimental curriculum utilizing the seminar method of instruction has required and elective courses in five major areas: foundation studies; professional theory and methodology, e.g., humanities; administrative theory and practice; research principles and practice; and communication studies. In addition, there are two groups of elective courses, special topics, e.g., literature of French Canada; and special services, e.g., art libraries and information.

COURSES REQUIRED FOR FIRST PROFESSIONAL DEGREE

REFERENCE AND BIBLIOGRAPHY

As shown in Table 1, forty-two out of the fifty schools require all students to take one or more reference courses. Three use an integrated approach for reference and bibliography; five schools which do not list specific course requirements probably treat it as a required elective.

Some schools combine national and trade bibliography and bibliographic organization with reference. Others include it with selection of materials. Albany, California, UCLA, and Rutgers require separate bibliographic courses designed to convey the principles concerning the construction, use, and evaluation of catalogs, bibliographies, and indexes and the role of the librarian as bibliographer. UCLA is the only school which requires two courses in the bibliographic functions central to librarianship. In other schools, however, there is evidence of the use of the bibliographic approach in teaching the organization of materials.

Frances Neel Cheney recently collected information concerning the relationship between cataloging and bibliography in the introductory courses. Her forthcoming article will provide additional information concerning the place of bibliography in the total program.

CATALOGING AND CLASSIFICATION

Cataloging and classification enjoy the same position in the professional core as reference except that Columbia, McGill, and Syracuse require "Technical Services in Libraries" as a second course in the organization of materials. Catholic University requires only the course "Technical Services in Libraries." North Carolina requires the latter course, and in addition requires a course entitled "Organization and Operation of Library Services," which involves "a study of the procedures involved in the acquisition, preparation for use, circulation and storage, and servicing of library materials."

The Rutgers course in this area is entitled "Bibliographic Organization and Description"—"an analysis of the means by which the availability and content of graphic materials are recorded."

California and UCLA each have two required courses: "Classification and Subject Cataloging" and "Descriptive Cataloging." Schools which require advanced cataloging and classification in addition to the basic course include Denver, Emory, Oregon, and the University of Southern California.

SELECTION AND ACQUISITION

Thirty-two (64 percent of the total) of the schools require a course in the general area of the selection and acquisition of materials. Such courses generally include criteria for evaluating and selecting

library materials in various media, operation of acquisition pro-
grams, the book trade, selection aids, and major national and trade
bibliographies. However, the scope, approach, and emphasis vary
greatly between a course entitled "Principles of Book Selection" and
such courses as Indiana's "Library Services and Collections" and
Columbia's "Technical Services in Libraries." At Indiana the prin-
ciples of selecting materials and selection aids are studied; in addi-
tion, major attention is given to services to meet the users' needs in
all types of libraries. The Columbia course is one of five required
courses (two in reference and bibliography, one in organization of
materials, and a fourth combining the administration, history, and
sociology of libraries). This technical services course is a critical
survey of the methods of acquiring, cataloging, conserving, and cir-
culating materials.

INTRODUCTION TO LIBRARIANSHIP; LIBRARY IN SOCIETY

Twenty-six (52 percent of the total) of the schools have a catch-all
course commonly entitled "Introduction to Librarianship," or they
have a course called "Library in Society." The variety in titles of
courses grouped here is in keeping with their heterogeneity in con-
tent. Western Michigan, for example, offers "Foundations of Librar-
ianship," which includes the history, function, and status of libraries
and deals with current library literature as well. Chicago's "Library
and Society," granddaddy of many of the courses by this title, is said
to focus on "the characteristics, organization, and functions of li-
braries as social agencies." "The Social Environment and Li-
braries," Toronto's new course in this area, is a consideration of the
environments—sociological, political, economic, technological, pro-
fessional, and educational—affecting information services and the
process of communication, the role of communication agencies, and
the characteristics of the various media.

Schools which use alternative means of conveying the information
usually included in the above two courses assign appropriate units to
such courses as "History of Books and Libraries," "Communica-
tions and Libraries," "Current Issues in Librarianship," or to
weekly colloquia.

ADMINISTRATION, MANAGEMENT, AND SYSTEMS ANALYSIS

Of the twenty-four schools (48 percent of the total) requiring an
introductory course in administration or systems analysis, Chicago
and Kansas specify systems analysis. Chicago's course, however, is
primarily concerned with the processing of data and with computer
applications. Thirteen other schools offer at least one elective
course in systems analysis.

Rutgers influence is evident in the required courses in library op-
erations and management offered by Hawaii and Wisconsin. Rutgers

has three required courses in these areas: 1) "Systems Analysis in Library Management," 2) "Administration: Theory and Practice," and 3) "Planning Library Services." Hawaii requires the first two of the above courses; Wisconsin, only the first. The three schools which do not offer a basic administration course probably include the content of such a course in their type-of-library courses in administration and management, although this is not the kind of information that is obvious from course descriptions.

RESEARCH METHODS

With the relaxation of the thesis requirement in most schools, it is understandable that only fourteen (28 percent of the total) require courses in research methods. Twenty-nine others (42 percent of the total) list it as an elective. In the seven schools which do not offer such a course, there are opportunities for directed individual study. It is important that all schools make provision for the development of the essential skills of reading critically and using effectively the results of study and research.

HISTORY OF BOOKS AND LIBRARIES

Although all but two schools make provision for instruction in the history of books and libraries, it is nonetheless startling to note that only nine (18 percent of the total) require it. New media, new forms of organization, and new technology must be integrated into the curriculum, but one dares to hope that the perspective which an understanding of library history can bring will still be achieved. This is difficult to attain via a brief unit in the "Introduction to Librarianship" course.

INFORMATION SCIENCE

While only eight (16 percent of the total) require students to register for a course providing an introduction to information science, it is the only subject other than reference, cataloging and classification, and administration, which every school includes in its curriculum. The six schools which do not list it as a required or elective course include it as an area of study within such courses as "Automation and Libraries" and "Systems Analysis."

COMMUNICATION AND LIBRARIES

Indiana, McGill, Maryland, and University of Western Ontario (8 percent of the total) list their courses in "Communication and Libraries" as required. Eighteen others list it as an elective. No estimate was made as to the number of schools which include part of this content within other courses.

SEMINAR: ISSUES AND TRENDS

Although only Denver, Kansas, and Simmons (6 percent of the total) list as required a seminar in issues and trends in librarianship, it should not be overlooked that another thirty schools list it as an elective course. This is the only course that University of Alberta students of this past year requested be incorporated into what the faculty felt was already too full a schedule. This request came forward despite the fact that at their weekly colloquia they were discussing such topics as new library legislation, serving the unserved, and library association programming.

ELECTIVE COURSES

In Table 2, which shows the distribution of elective courses, required electives are tabulated as electives. Descriptive and analytical bibliography are listed in the "Technical Services" category; courses primarily concerned with enumerative bibliography and with bibliographic control of knowledge from the user's point of view are listed under "Resources."

BACKGROUND

Out of 179 electives in background courses, 91 (51 percent of the total) deal with the history of books, libraries, etc.; 26 (15 percent) with communications; 25 (14 percent) with comparative librarianship and international relations; 17 (9 percent) with publishers and publishing; 15 (8 percent) with the library in society; and 5 (3 percent) with introduction to librarianship.

In historical courses California is out in front with eight, Columbia is second with five, Chicago and Denver tie for third place with four each. Two unique courses in this area are Denver's "Major Figures in American Librarianship" and UCLA's "History of Library Technology."

A number of schools also use the historical approach in such courses as "Historical Development of Literature for Children," "History and Theory of Cataloging," and "Education for Librarianship." Then there is the regional approach represented by UCLA's course, "Libraries and Literature of the Southwest," and Peabody's "Southern Libraries."

ADMINISTRATION

Of the 525 elective courses offered in the area of administration and management, 136 (26 percent of the total) pertain to special librarianship; 116 (22 percent) to school librarianship; 61 (12 percent) to academic librarianship; 58 (11 percent) to general administration and/or management; 55 (10 percent) to work with children and young people in school and public libraries; 52 (10 percent) to public

librarianship; and the remaining 47 (9 percent) to systems analysis, buildings and equipment, automation and libraries, and library systems.

Nine of the schools, which follow the Rutgers pattern of approaching administration and management on the basis of general principles and practices rather than type of library administration and management, have succeeded in retaining this approach insofar as academic and public librarianship are concerned, but only Rutgers has resisted the development of courses in the administration of special libraries. Only Illinois in the United States and McGill in Canada do not offer school library administration courses.

About half of the fifty-five courses in work with children and young people are concerned with public library materials and programming; the rest deal with both school and public library situations.

Fourteen schools are offering separate courses in systems analysis. Five offer courses in the library and the legal process. Several of the other new courses in this area are "Genealogical Research Library Work" (Brigham Young), "Administration of Libraries in Asia" (Hawaii), and "Librarianship and Bibliography of Africa South of the Sahara" (Indiana).

In the courses dealing with administration and management there is evidence of the impact upon library school curricula of the development of library systems, of the automation of library processes, of the use of multi-media approaches, and of staff specialization.

REFERENCE

Of the 340 elective courses in the field of reference and bibliography, it is not surprising that 59 percent fall into the areas of the bibliography and literature of the subject fields. It is worthy of note that forty-three out of the fifty schools offer separate courses in government publications. In several schools, documents are combined with other areas, e.g., Simmons offers a course on "Bibliographical Methods and Government Publications," and Albany has one on "Serials and Documents."

Another course of some interest deals with audiovisual materials. Thirty-one schools find it more satisfactory, for one reason or another, to offer a course geared to the needs of librarians responsible for the selection, organization and use of these materials rather than to rely upon service courses offered elsewhere on campus.

MATERIALS AND SERVICES

Of 186 elective courses in the areas of library materials and services for the various age groups, about three-fourths deal with materials and services for children and young people.

Kansas and McGill are two of the schools which combine materials

TABLE 2

DISTRIBUTION OF ELECTIVES BY NUMBER OF SCHOOLS OFFERING THEM AND BY NUMBER AND PERCENT OF ELECTIVE COURSES OFFERED VS. UNIQUE REQUIRED COURSE OFFERINGS

Subject Area	Electives		Number of Schools Offering Electives	Number of Schools in Which Only Course Offered is Required	Total Number of Schools Offering Course(s) in Subject Area
	No.	Percent			
Background	179	100			
History of books, libraries, etc.	91	51	44	2	46
Communications, including intellectual freedom	26	15	20	4	24
Publishers and publishing	17	9	17	0	17
Library in society	15	8	13	14	27
Introduction to librarianship	5	3	5	11	16
Comparative librarianship and international relations	25	14	21	0	21
Administration	525	100			
General course	58	11	32	8	40
Library systems	8	2	8	0	8
Systems analysis	14	3	13	1	14
Automation and libraries	12	2	11	1	12
Buildings and equipment	13	2	12	1	13
Academic librarianship	61	12	43	0	43

Public librarianship	52	10	43	0	43
Work with children and young people	55	10	42	0	42
School librarianship	116	22	48	0	48
Special librarianship	136	26	49	0	49
Reference, etc.	340	100			
General course	46	14	30	19	49
Government publications	46	14	43	0	43
Serials	8	2	8	0	8
A-V materials	38	11	31	0	31
Humanities literature, including humanities and social sciences literature	75	22	46	1	47
Social sciences literature	54	16	40	1	41
Science and technology literature	73	21	49	0	49
Materials and services, exclusive of reference	186	100			
Materials for children, including materials for children and young people	68	37	47	0	47
Storytelling	21	11	21	0	21
Materials for young people	32	17	32	0	32
Materials for adults	36	19	26	0	26
Reading	29	16	21	0	21

TABLE 2— Continued

Subject Area	Electives		Number of Schools Offering Electives	Number of Schools in Which Only Course Offered is Required	Total Number of Schools Offering Course(s) in Subject Area
	No.	Percent			
Technical services	326	100			
Selection and acquisition	27	9	23	20	43
Bibliography (related to technical services)	16	5	15	0	15
Technical services	25	8	23	4	27
Cataloging and classification	83	25	44	6	50
Classification	20	6	16	0	16
Indexing and abstracting	17	5	15	0	15
Information science	135	41	43	1	44
Reprography	3	1	3	0	3
Library education	25	100	21	0	21
Study and research	175	100			
Research methods	39	22	32	12	44
Seminars	45	26	32	1	33
Directed study	91	52	48	0	48

and services for a particular age group into a single course, e.g., "Public Library Materials and Services for Children."

Simmons's three courses in these areas are "Libraries, Contemporary Issues and the Child"; "Libraries, Contemporary Society and the Young"; and "Service to Adult Readers." In all three courses, multi-media materials are considered in terms of their potential contribution to patrons and to programs.

TECHNICAL SERVICES

Of the 326 electives in the area of technical services, 135 (41 percent of the total) are in information science; 83 (25 percent) in cataloging and classification. In the remaining 108 (34 percent) no area accounts for as much as 10 percent of the offerings.

Since there are still some faculties which believe that the various aspects of information science should be fully integrated into the entire program rather than taught as separate courses, the preponderance of electives in this area seems significant. Four schools—California, Case Western Reserve, Chicago, and Pittsburgh—all of which have doctoral programs, offer one-third of the total number of electives listed in this category. Their courses deal with designing information systems and the non-numerical uses of the computer as well as with the implications for libraries of new information-handling techniques and equipment.

Most schools are offering one or two courses which introduce students to the machines available for information storage and retrieval and to coding, file organization, and searching techniques.

LIBRARY EDUCATION

The twenty-five library education courses treating the history, goals, methods, problems, and trends are designed to prepare prospective library school teachers. Most of these courses developed as a result of the priority assigned to faculty development in the program of federal funding for library education.

STUDY AND RESEARCH

All schools make provision for directed study and research, an important means of encouraging outstanding students to work in areas of special interest. At Catholic University, which does not list a separate course for directed study, students select and begin to develop their dissertation topics in the "Research Methods Pro-Seminar."

At Hawaii, a "Field Seminar," offered near the end of the student's program, is designed to promote understanding of the total library scene. Working in small groups, students apply the principles they have learned to their field experiences.

Simmons also has worked out a unique program combining

seminars and advanced independent study for small groups of students interested in pursuing a topic and preparing a paper of publishable quality. One of these unstructured seminars is entitled "Radical Perspectives for Library Change." Fourteen other seminar topics are listed, and students interested in other subjects are invited to seek out a faculty member and explore the possibility of establishing a new seminar.

Thirty-three schools employ the seminar technique for involving students in discussions of issues and trends in librarianship and related areas. A number of schools also use this designation for special workshops and institutes scheduled at various times throughout the year.

A century ago Ralph Waldo Emerson complained that "the colleges, whilst they provide us with libraries, furnish no professor of books; and, I think, no chair is so much wanted."[31] Today when library schools are graduating well over 5,000 students a year, the library personnel picture has changed radically. How many of these graduates could satisfy Emerson's requirements for an academic librarian remains a question.

Current library school curricula, in the true Emersonian sense, owe much to the work of such people as Dewey, Williamson, Wilson, and the members of the Board of Education for Librarianship. Only through the efforts of library leaders committed to a belief in the importance of professional education has progress been possible, for until the decade of the 1960s, the resources available to library educators—apart from Carnegie bounties—were either minimal or totally inadequate. Even now, very few schools receive the level of support required to achieve professional curricula of the highest caliber.

As shown in Table 1, all of the schools studied offer courses in the areas of reference, cataloging and classification, administration, and information science; 96 percent in the history of books and libraries; 92 percent in selection and acquisition; 86 percent in research methods; 80 percent in introduction to librarianship or library in society; and 44 percent in communication and libraries.

A sign of the times is that the number of elective courses offered in the areas of administration and technical services, taken together, account for 49 percent of all electives. If reference is added, these three areas constitute 68 percent of the elective courses listed (see Table 3).

Despite this tendency to retain a core of introductory professional courses, Williamson's comments of fifty years ago still hold true today. There are marked differences among the schools as to the relative amount of time devoted to the different major areas of the curriculum; there remains the problem of providing thorough

TABLE 3

SUMMARY OF NUMBER AND PERCENT
OF ELECTIVES OFFERED

Subject	Number Offered	Percent of Total
Background	179	10
Administration	525	30
Reference	340	19
Materials and services	186	11
Technical services	326	19
Library education	25	1
Study and research	175	10
Total	1756	100

instruction in one year in the entire field of library work; few schools have found ways to offer programs that utilize fully the interdisciplinary approaches that theoretically, at least, constitute one of the major reasons for their being located on university campuses; and too few meet criteria for sound curriculum design. In some schools a thoroughgoing curriculum evaluation is long overdue. Any school which has been tinkering with its curriculum for a decade or two—adding a course here, subtracting a unit there, or substituting one course title for another—should consider undertaking a review and, if appropriate, major revision of its curriculum. It is not a matter of just realigning course content, but often of realigning approaches as well. This recommendation is not acquiescent to the predisposition prevalent in too many quarters during this past decade, i.e., that to be good, educational programming must be new and different. It is rather a challenge to every school to institute sound continuing curriculum evaluation and revision according to the best available scholarship. One means used by several faculties for effective curriculum review is the scheduling of regular faculty retreats for this purpose.

All schools face the problem of attempting to retain flexibility while adding new content. As a result, there is experimentation with telescoping courses, relaxation in the number of required courses, and the use of seminars and colloquia to introduce significant areas of professional knowledge as well as to keep abreast of major issues and trends.

The most encouraging findings emerging from this exercise are

the amount of experimentation disclosed and the dynamic character of curricula today. The major problem is the amount of work still to be undertaken if library school curricula are to be responsive to the needs of libraries and library users of the future. In curriculum planning a faculty cannot afford more than a passing glance backward. It can only face forward and endeavor to encourage that "variety and vigor" in curricula which will mean life for students in the library schools and in the libraries of tomorrow.

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CURRICULAR CHANGE IN THE PROFESSIONS

Colleges and universities have begun to make curricular changes, partly in response to what are believed to be student needs and demands, but just as frequently in response to other forces and factors. And these reforms appear to be succeeding variously, depending on the primary motivation for initiating change. Several, which seem to have been brought about for economic reasons, or to satisfy faculty desires, appear largely irrelevant to the educational needs of college students or even antithetical to them; they may even have failed to achieve the purposes for which they were attempted.

First there is the decline of general education as a distinct movement. General education was really born at Columbia in 1918, given characteristic form at the University of Chicago in the 1930s, spread through the efforts of several of the great mid-western universities in the 1940s, and granted respectability through the publication of the Harvard report[1] in 1945. Its distinctiveness consisted of prescribed interdisciplinary courses seeking behavioral objectives linked to man's non-vocational life. While the number of required courses has not shifted appreciably since 1957, the character of those offered has changed and will do so more rapidly in the future. General education is being replaced by the distribution requirements popular in the 1920s and 1930s which ask that students take a certain number of departmental courses from each of the major divisions of knowledge. Now ostensibly this shift provides greater flexibility for students, but actually it was brought about by faculty unwilling to teach nondepartmental and staff courses. The academic climate was such during the 1960s that young Ph.D.'s would not accept a position in which they would teach a staff course, for they saw their own future more related to the department and departmental offerings. The reform of general education does not seem likely to improve the curriculum for students because the distribution system does not force faculties to create courses for the non-major. And even if the regression proceeds, as it has in a few places, to the free elective system, it still will not bring improvement.

A second category of reform, most starkly stated, consists of changes in academic calendars. Pittsburgh really began the movement when it created the trimester to enable fuller utilization of

scarce physical facilities. That effort was followed quickly with other attempts to gain year-round operation. Schools on the semester system changed to a four-quarters plan, and schools on the quarter system either tried the trimester or emphasized that the four quarters already insured year-round operation. Then came the flurry of other temporal modifications. Some tried the three-three (three courses in each of three terms), four-one-four (the one being a month of interim studies), four-four-one (a three semester academic year, starting the year in early September so the semester ended before Christmas), and even a revised single course plan (one course taught in seven weeks). These were spawned for a number of reasons. Calendar change is easier than real curricular revision and makes the faculty feel it is accomplishing something; it improves faculty morale over the lame duck session after Christmas in the traditional semester, and is a way of attracting attention to an institution having something new. Perhaps the most cynical attempt was the major university on the quarter system which divided each quarter in half so that professors would teach the first five weeks and students would do independent study the second part, thus allowing faculty more time for their own work. Only with such a bribe could senior professors be persuaded to teach lower division courses.

Then there are those reforms, really not curricular but of technique, under the rubric of uses of the media. These include open- and closed-circuit television, computer-based or computer-assisted instruction, language laboratories, tapes, recordings, multi-media classrooms and programmed learning. Once again economics motivated experimentation. Was it possible, through the use of technology, ultimately to bring about savings in the instructional budget, either by presenting a professor to larger numbers of students, shortening the time required for students to master something, or making students responsible for more of their own education, thus ultimately increasing the student-faculty ratio? By and large this goal has not been attained, and use of the media has not become central in higher educational practice. There are, to be sure, thousands of experiments, and there are a number of institutions which have developed large-scale programs for limited purposes. But in late 1970, the bulk of the college curriculum continues as though the electronic revolution had never happened.

A fourth major category of reform consists of newer ways of grouping students and teachers, and this seems to have been stimulated more because of educational reasons than were some of the other reforms. Examples of new groupings include the following: team teaching at Chicago Teachers College, the house plan at Stephens, an experimental college at Hofstra, block scheduling at Florida State, cluster colleges at Michigan State and University of the Pacific, and the creation of the Santa Cruz branch of the University of

California with its separately housed colleges of 600 to 1,000 students. These seem designed to capture something of the spirit of the older, small residential colleges in the context of a larger institution which provides needed economies to scale. Descriptive reports from a few indicate some success. Students do seem to like the smaller groupings; and when students get to know one another well by being in a series of the same classes, they seem to develop more rapidly. If the serious problems of cost and faculty satisfactions can be solved, some form of regrouping may prove a fertile approach to reform. However, in the enormous state colleges and universities, with older ways of organizing already built into physical plant, any such device affecting large proportions of students still seems remote.

Central efforts to change the curriculum in ways responsive to student needs are the many attempts to create ad hoc, issue-oriented courses and courses of differing lengths of time. These categories seem to have originated through student creation of free university courses, and each set of recommendations made following a campus upset includes provision for ways of offering new-style courses and getting them approved through the curricular administrative apparatus. Such examples as the experimental courses at San Francisco State, freshman seminars at Stanford, and the new freshman year program at Antioch appear well received, but difficulties abound. Quality control is an issue; that is, how to insure professional competence to teach a wide-ranging problems-center course—or if teams of faculty are used, how to afford it? Logistics also are involved—how to accumulate library holdings and to make them available for constantly changing course titles? At Stephens College, for example, a junior year seminar, required of all students, changes its focus each year and the library certainly has not been able to keep up. But above all is the same problem which plagued the older general education interdisciplinary courses; that is, how to prevent ad hoc courses from being superficial and conveying a false sense of sophistication to students who experience them. Older courses in personal adjustment or functional mathematics failed, and these new style courses may fail also.

Still another promising sort of reform consists of providing off-campus experiences for students which enable them, in theory at least, to test academic ideas in real life. When well organized and funded, these efforts have frequently produced dramatic results. Cooperative work-study at Antioch or Northeastern seems essential to the impact those schools have had on students; and at Northeastern, a university of 26,000, the cooperative work-study program allows it to be competitive with lower tuition public institutions. The overseas campuses of Stanford University appear to be one of the most significant elements in a Stanford undergraduate education; however, several questions arise. If every institution attempted overseas

experience, are there enough places to put students? Even now, parts of Europe which once welcomed students are much less open and receptive. The ghettoes obviously cannot absorb too many more transients, and even an expanding economy would find difficulty accepting cooperative study students from freshman classes of over two million students. Of course cost is a factor. Smaller institutions, already facing serious financial crises, find the necessary administration for a full off-campus program too expensive. And if it should happen that junior colleges became the main route by which students receive their lower division education, can meaningful off-campus experience be fitted into a two-year program?

Without the drama of the 1910 Flexner report[2] on medical education which closed over half of the nation's medical schools within a year after its publication, professional education is undergoing major transformation. Not all fields exhibit the same ferment; librarians and agriculturists do not seem particularly active, and not all schools within a professional field accept the validity of suggested reforms. But within the classical professions of law, medicine and theology, schools are trying to accommodate to the last third of the twentieth century and to prepare their students for the twenty-first. In many of the professions, an identity crisis is resulting in serious curricular experimentation—declining undergraduate engineering enrollments do raise questions about content and method. The innovations attempted, in aggregate, form a pattern both of motivation and technique. Whether the experiments will work and professional instruction will improve cannot be known, but the attempts can be described under several rubrics.

Consistent with the American propensity of solving educational problems with new courses, there is much experimentation with new course and research structures. Interdisciplinary and inter-field efforts seem particularly popular as when psychiatrists and endocrinologists pool their efforts to teach about thyroid problems; engineers, architects and economists organize a jointly taught sequence on urban planning; and professors from schools of business and education try to blend their insights about the art—or is it science—of administration and decision-making. Perhaps the most active variant in this regard involves the social and behavioral sciences. Medical education has finally recognized that health and disease are as much social matters as biological ones and now seek to include insights from psychology, sociology and anthropology in the basic curriculum. Law schools, which generally in the past had remained aloof and withdrawn from the rest of the university, have begun even to bestow the accolade of law professorships on economists, political scientists and even—as at the University of Denver—on a sociologist. Education and social work, once preoccupied with the psychological bases of professional practice, are seeking greater

contributions from sociology and anthropology since human change and betterment cannot be accomplished without awareness of how groups, societies and cultures organize themselves.

In the past, graduate professional faculties had disdained undergraduate teaching, generally saying that pre-professional work could safely be left to others, especially since the basic science and theory needed for professional work had to be retaught anyway. However, a real entente seems in the making. At Wisconsin and Berkeley law professors and those in the social sciences have created interdisciplinary courses on such things as social policy; for undergraduates at Stanford, distinguished historians, economists, engineers and lawyers have created an interdisciplinary sequence on international affairs. Of a more practice-centered orientation are the decisions of social work educators to vacate the isolation of a graduate program only and the attempts of a few law schools to offer undergraduate courses to prepare para-legal workers. This reawakened concern for younger students is also present in the undergraduate professional schools. A lively introduction to education, including some teaching experience, is urged for freshmen. Engineering educators continue the search for ways of making the undergraduate curriculum an effective blend of humanities, social sciences and broad engineering science, leaving for work or graduate training the development of specialization. In theology, reformers see the need for a well articulated program extending from undergraduate study, which begins to help students think theologically, to a first-year graduate program to help decide vocational issues, on to the seminary which concentrates on preparation for the active ministry.

Then too, with admittedly faltering steps, the professional fields have finally begun the search to realize the potentialities long claimed the humanities could make to the attitudes, values, ethics, and indeed to the humaneness of professional persons. Half of the recommended undergraduate curriculum in business should be outside the professional field, and students should be encouraged to take courses in art, literature and philosophy. A specially designed, applied humanities sequence at the University of California at Los Angeles seeks to show the ethical, political and aesthetic interaction with engineering through historical study. Some medical schools have expressed this same concern by revising admission requirements so that bright students who majored in the humanities are as acceptable to medical school as if they had taken organic chemistry, comparative anatomy and the ubiquitous scientific German.

But courses operate in a temporal context, and the reforms in professional education are trying many ways to reorganize and reallocate students' time. In the past, especially in engineering, medicine and law, the prescribed curriculum was so tightly scheduled

that an unfortunate lapse at registration time might jeopardize one's chances of even graduating. Now greater flexibility and freedom of election are the rule. Not all doctors will need to know the details supplied by gross anatomy, so why make it a requirement? There is the aphorism that the better the lawyer the less he is inclined to "know the law" in the sense of possessing vast amounts of legal detail, so why require so many detailed courses? If it is true, as it clearly is, that few engineers stay with the specialty they studied as students, why not let them explore a bit through more electives? It might actually broaden their horizons.

However, more than just freedom seems necessary. Much curricular thinking has been restricted by the traditional elements of the academic calendar—two semesters for each of four years and the like. Breaking such patterns might be more efficient and might even force some rethinking of the curriculum and teaching. Thus, Yale now views its medical program as consisting of three blocks rather than four. Princeton's architecture program is comprised of three modules extending over six years rather than maintaining the previous monolithic five years of tightly prescribed work. Not all medical students need a bachelor's degree nor even the junior year of undergraduate work, and some find the senior year of medicine a waste since it duplicates what they will be doing as graduate interns and residents. Thus, acceleration for some, and extension beyond the normal four years for others, would seem to make sense; Harvard medical school is seriously considering making this possible—and respectable. Although the trimester has not proven the panacea some hoped it would be for undergraduate education, trimesters of fifteen weeks can enable students to finish an undergraduate curriculum in engineering science and a master's degree in an engineering specialty in less than the five years which the undergraduate engineering sequence had become.

Then there is considerable thought and some experimentation with a common curricular stem for related professional specialization. To the earlier suggested common undergraduate work in engineering science, as a stem for graduate or employment specialization, has been added the idea that a common first two years in basic health science might be appropriate for future dentists, doctors and research workers in the health-related fields. The dean of the School of Dentistry at the University of Missouri at Kansas City sees this as a logical outgrowth of a center for health-related science. Some theorists in social work education are also convinced that the undergraduate preparation for social workers, nurses, legal aid workers and others in helping professions could be common if somehow departmental barriers could be broken down.

Thinking about common experiences, greater interdisciplinary work and better articulation between the professional and under-

graduate years presupposes appropriate administrative and organizational structure. Since among reformers there is considerable agreement that the traditional departmental and college structure is divisive and tends to compartmentalize student thinking, the quest is on to find better alignments. First, are the efforts of the professional schools to draw close once again to the university? During the apogee of specialization of professional education, serious question was raised as to whether the medical or law schools really needed the university except as a financial base. Their professors rarely saw or spoke to those in the arts and sciences, and the professional faculties seemed able to fill students' time with their own courses. But, perhaps initiated by education's willingness to consider the preparation of teachers a university-wide affair, professional faculties have begun to ask for and offer help to other departments of the university. Through more joint appointments, cooperatively taught courses and the accepting of student enrollments from other parts of the institution, at least a few barriers have begun to tumble.

Even more radical changes are in the wind. A few institutions see administration as essentially the same whether it be in business, education, hospital or philanthropy. Then why not organize a school of administration and policy formation? At the State University of New York in Buffalo, there is serious consideration of having a single faculty responsible for business, social work and the underlying social and behavioral sciences. Such reasoning also suggests the breakup of the traditional schools of arts and sciences as being an anachronism, having lost its once preserved unity and integrity. Thus the health-related sciences belong with medicine, public health, nursing, and dentistry, while the social sciences belong more properly with law, administration and social work. There is clearly a limit to how extreme such new formulations can be, but the thoughts of what might be done expand the mind, which is probably what reformers most want.

If organization and curricula change, changed degrees and degree requirements seem likely to follow. There appears to be reasonably widespread agreement that there are too many different degrees offered by the nation's colleges and universities and that a more systematic degree structure could be achieved. One cluster of reforms would be based on several principles. The number of different bachelor's degrees should be kept to a minimum but the requirements should be sufficiently flexible as to allow side differentiation of programs within each. Each advanced degree should be a definite recognition of a formal educational program but should not be predictive positively or negatively of candidacy for still more advanced degree work. Thus a master's degree in a professional field should prepare students for direct employment or for further graduate work. Master's degree requirements should at the same time bear enough

relationship to master's work in related fields so that students could change career focus and not lose an inordinate amount of time through transfer to a new program. In both the professional fields and in science and arts, reality should be recognized with the creation of appropriate intermediate degrees between the master's and the doctorate. And quite significantly, regardless of degree level it should be accepted that the several components, general or liberal, basic science or theory and applied professional subjects, should not be separated into different time periods or levels. Mix is judged better than separateness.

Professional education, as all education, depends on instruction and modes of learning and here, while coming slowly, change can be observed. Even professors have begun to question excessive lecturing and formal classroom experience and are willing to consider other methods of teaching. By far, the one pervasive reform is the attempt in most professional schools to increase clinical or field experience and to initiate it much earlier in students' education. In medicine, clinical experience in the first year helps motivate students for subsequent work in basic science besides contributing to their socialization as doctors. Law students should spend the summer between the first and second year in some intensive law-related work—law office, court, governmental bureau or the like. Social workers need clinical work both as undergraduates and during the second year of their graduate professional program, and future ministers need much more intensive and better supervised clinical experience than the traditional part-time preaching done chiefly for financial reasons.

Also the renewed interest in individual research and independent study stresses a renewed faith that students should have more responsibility for their education and what and how they should study. This may take the form of a real life design problem undertaken by a freshman architecture or engineering student, or independent laboratory research by a senior medical student who is actually allowed time for it rather than being forced to steal the time from clinical rounds and required lectures. And this trust in individuals seems to underlie uses of the computer and other new instructional media. Computers are located throughout one campus so students can use them to solve complex problems; on another, each medical student is required to spend time in a computer-based diagnostic center, testing his own patient assessment with that made by a computer knowing every case in the history of the teaching hospital. Videotape and sound tapes allow storage of lectures, operations, clinical interviews and technical procedures to which students can refer when they feel the need. In one school of dentistry, for example, movie films of fifty complex dental procedures are stored in the clinic together with nine projectors. In spite of some expected patient reaction, a dental

intern unsure of how to proceed, can stop, go view the filmed procedure, and return with hopefully greater skill. Nurses with a five-minute film clip, several oranges and a hypodermic needle apparently develop greater skill on their own than in the presence of a teacher. And, of course, television allows large numbers of students to view intricate surgical procedures.

Before World War II most American professional schools proceeded almost on the assumption that those who practiced would do so in the United States and that there was really no need for the curriculum to transcend that culture. However, the nation's involvement in world affairs, faster modes of transportation and communication and the internationalization of knowledge have rendered past practices obsolete. While some professional fields have done so grudgingly, all have been forced to reexamine their curricula with a view toward internationalizing them. Medicine tries to do it by giving professors international experience. Law professors contribute to undergraduate general education by giving courses on international law and foreign trade arrangements. A number of schools have infiltrated foreign concepts in the curriculum through greater use of anthropology and the study of comparative cultures.

Two other general areas of reform are more statements of concern than specific accomplishments. The first is the quest to find better ways of developing a personal professional identity in students who also have acquired a workable system of personal ethics. Then, through relatively unlimited contact with professional faculty members, the student was expected to acquire almost unconsciously ethical principles to guide him in his practice. For many reasons, e.g., increased numbers of students, more complicated ethical dilemmas (heart transplants, for one), and increasingly less localized collegiate institutions, the more informal ways no longer work, and new ones must be found.

Then too, it is generally agreed that the half-life of knowledge in the profession has probably shrunk to five years and that those in active practice should constantly seek reeducation. While everyone knows this, institutions have as yet not seriously thought through the content, organization or method of financing continuing education for professionals. Except for education, agriculture and some administration departments, continuing education programs for professionals in universities are quite rare indeed.

These attempts at reform expose, illustrate or, in some cases, even cause a number of unresolved issues. While most of these can never be fully resolved, institutional attempts to change curricula are likely to continue to be patchwork efforts.

Clearly the matter of the number of professionals needed in order to maintain a reasonable steady flow is perplexing. In the past, there have been such wild fluctuations as the oversupply then undersupply

then oversupply of engineers within less than two decades. Similarly there is the increased production but under-utilization of nurses, and the overproduction of biological science research workers and the underproduction of medical practitioners.

Identification of social demand involves the relationship of professional schools to the professions, which also produces some unsolved problems. There is uncertainty as to what the professions expect from the schools and how those expectations are made explicit aside from the general agreement that the schools train practitioners. Uncertainty exists as to curricular content, the schools' proper role in certification, and what research for the profession should be carried out. There is also uncertainty as to whether professors in professional schools should be theorists or practitioners, with the schools generally seeking more academicians while the field urges more practical experience. A related matter is that of the proper role of the professional school as an innovator of professional practice. Differences between medical facilities and the leadership of the American Medical Association on such things as group practice illustrate this point.

But a number of issues of even more direct curricular significance are perplexing.

1) Should the central thrust of the curriculum be designed to provide high technical competency for first employment, or concentrate on broader understanding upon which long-term career growth can develop? Industry would like young engineers to be able to work, while the engineering schools want to produce future leaders in society.

2) Should professional schools seek to prepare future practitioners and future research workers in the same school and with substantially the same curriculum, or for that matter, can it be done? Seemingly a future school principal and a future learning theorist require different skills but can a school afford the two faculties to develop them?

3) Is there an appropriate balance between the three component parts of the curriculum—the liberal arts and sciences, professional services and applied arts? In theory there should be, but in practice there is radical disagreement.

4) How can increased knowledge of great relevance to the professions be accommodated without undue lengthening of the time required for preparation? Already medicine has reached extravagant lengths and other fields have begun a stretch-out.

5) Given that clinical or field experience is valuable, how can it be paid for, conducted and supervised to exploit its full potentiality? Medicine does it well but expensively, while education does it poorly but at much less cost.

6) Given that the faculties of the arts and sciences have themselves become professionalized, how can enthusiasm be obtained for needed and relevant work in the arts and sciences for professional students? The solution is either for each faculty to do it itself, which then converts each professional school into a mini-university, or hope that the leopard of arts and sciences will change its spots.

7) What sort of research is appropriate for faculties and students in professional schools—pure, basic, applied—and in what proportions? Time spent in pure research is time unavailable for professional practice.

As such issues are resolved, and as some of the reforms are more fully tested, it might be possible to evolve some principles or criteria which would apply to any of several professional fields.

At present there exists no general theory of curriculum construction or no generally accepted model for professional education (with the exception of a tendency for professional schools to approximate the medical school), nor probably should there be. There are essential differences among the various professions, and individual schools serving the same profession have different missions. Stanford's engineering school serves a different clientele than does the school of applied technology of San Jose State College, and the Harvard School of Education conceives itself different from New England state teachers colleges. But as this analysis has established there are common problems and common attempts at reform which suggest the possibility of some principles or ways of conceptualizing the curriculum which could be used effectively in most of professional education. And there have been a few efforts to create generally applicable principles or models.

In a sense the composite of current reforms implies a model, although without detailing the full parameters of professional curricula. These reaffirm the postulate that professional schools belong in a university context and that the full professional preparation should include graduate and undergraduate education and some distribution of educational experiences between the arts and sciences, professional sciences, and application. Partly because the essence of professional practice consists of decisions about complex human problems which transcend disciplinary boundaries, and because the amount of relevant knowledge has grown so enormous that new organizations of knowledge are necessary, new courses of an interdisciplinary or interdepartmental character are needed. If these are to be appropriately taught, something other than the lecture technique should be employed so that the insights of people from several fields can be introduced to students. Seminars and conferences or other small group techniques should likely be used much more frequently. To facilitate such joint efforts the traditional divisions of a university

into a school of science and arts, and separate professional schools, all divided into discipline or specialty departments, are proving inadequate. While there is no general agreement about proper new organizational structures, creating composite departments of several related fields, redeployment of basic science and theory departments into relevant professional schools, or expanding the institute or center into an agency of instruction, all are being tried.

In the past, with the exceptions of the reliance of education and social work on psychology, and of business on at least some principles of economics, professional schools accepted the social and behavioral sciences chiefly as contributing to the general education of students. As major institutes of technology (M.I.T. or Cal Tech) began to reform in the 1950s, the phrases "humanities" and "social sciences" were used almost interchangeably as devices for broadening the education of professional students. Current efforts go much farther. Law and medicine see the social and behavioral sciences as making direct and significant contributions to the professional competencies of their students; education, social work, nursing and business see professional matrices in the full spectrum from psychology to cultural anthropology. Those same fields also appear to constitute an effective technique for introducing needed international dimensions into the curriculum. Through comparative studies of culture and social psychological interpretations of role and personality, future practitioners should be led away from a traditional cultural parochialism.

In order to compensate for the mounting academic and theoretical emphases characterizing professional education during the 1950s and 1960s, and in an effort to restore the human being as the chief focus of professional concerns, there is a renewed interest in clinical or field experience. As this is expressed, safeguards are created to prevent the professional school from degenerating into just a trade school. But early and sustained clinical work is now judged essential as a powerful motivation for students subsequently to exploit studies in basic science and theory. If students are to receive timely clinical experience, the traditional academic calendar may prove inadequate and new temporal arrangements will be created.

Partly because of student demands for greater freedom, but more centrally because of the realities of specialization, even in those professions which traditionally have produced generalists, there is a loosening of specific course requirements and a widespread reaction against a large core curriculum required of all students. This does not mean that some basic material should not be possessed by all practitioners, but the amount of such material and its placement in the professional program are being reconsidered. Greater freedom of election and greater freedom from requirements mean that students in most of the fields should spend more time on independent

study, research or developing specific skills through individual effort than through formal class instruction. The computer especially possesses educational potential as well as subsequent significance for practice, and consequently experience and training in computer science and techniques are being added to the formal curriculum.

On two final matters reformers agree that something should be done, but are unsure of the method of proceeding. Older techniques of socializing future professionals into the ethics of a profession have broken down under the impact of size and numbers. There is a widespread belief that the humanities, properly utilized, could contribute to a humanizing of professional education. There is also general acceptance that the half-life of the content of professional practice has so decreased that every professional person requires constant upgrading through continuing education. There is the further belief that professional schools should assume responsibility for that retraining if appropriate ways of funding could only be discovered, but as yet actual efforts are quite minimal.

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NEW TRENDS IN THE CURRICULUM OF
LIBRARY SCHOOLS

This survey of current trends in library school curricula is based on certain data which may be almost exclusively available to the Committee on Accreditation and the Office for Library Education; on certain personal observations made possible through the travel and visits that coincide with my particular ALA headquarters's assignment; and on the informal feedback in correspondence, interviews and conversation that are a result of my position as director of the Office for Library Education. While that is not a bad vantage point from which to survey the library education scene, it is not a scientifically controlled view, and although I am convinced that what I see is indicative, I would be foolish to pretend that this report meets the requirements of rigorously controlled research. It is based upon developments that happen to have come to my attention.

The major source of these impressions is the collection of annual reviews submitted to the Committee on Accreditation by forty-five of the forty-eight library schools which in the fall of 1969 offered programs accredited by the ALA. These reviews are quite open-ended, leaving a great deal to the discretion or the ingenuity of the schools. The requests for rigid statistical data are held to a minimum, and the report of any one year is simply that—a report of the year. It does not necessarily refer to important trends which may already have been reported in earlier reviews, nor to developments now in progress which had not yet come to fruition during the report year. Still, there is room in the review forms for a report on plans for the future. I did have access to earlier reports, and the report information has been supplemented by informal feedback, by information from other sources, and from the accumulated observations of library education which are an automatic part of my job. In general, then, this summary, while sometimes not a fair picture of all the developments in any single school, provides a not inaccurate general overview. Though this is not a rigorous report on everything, I think the reader can place confidence in that which is reported.

Combining the information that has come from the several sources mentioned, it appears that there are some noticeable trends, or at least evidences of stirrings, in several areas of library education. These areas are arbitrarily identified here but certainly they are

susceptible to arrangement under other rubrics. My headings for the
areas in which trends can be seen are: administrative organization of
the schools, scope of the schools' programs, faculty make-up, admis-
sion and graduation requirements, student participation, and curricu-
lum structure and content. Perhaps the easiest way to deal with this
rather unstructured outline of headings is simply to summarize some
of the reported or observed trends under each as they appear in the
sources to which I have had access, and then to say something about
what appears to me to be the portent of these trends. Given the rapid
rate of change in our society, and the impact upon education of
decisions made in other spheres, this can be taken only as the state
of things as of September 7, 1970.

THE OBSERVABLE TRENDS

ADMINISTRATIVE ORGANIZATION OF THE SCHOOLS

A long-term trend, which the latest annual review shows to be
continuing, is that of movement away from departmental status to
more autonomous status as a school. In the annual review of 1968/69,
two more schools reported this change in status, and two additional
ones were announced in June of 1970. Others reported that they are
working toward autonomous status. More than four-fifths of all the
schools are now autonomous; less than two-thirds were autonomous
five years ago.

The ALA "Standards for Accreditation" do not require that
library education be offered only in an autonomous professional
school; they simply recommend that the administrative organization
be such as to assure the "status and continuing financial support
sufficient to carry out the program in accordance with these
standards."[1] But one good reason that the programs are changing
from departmental or divisional to school status is that the adminis-
tration of a program of professional education at the graduate level is
becoming an increasingly complex operation which is better managed
through an autonomous organizational set-up. In other words, in
most cases today organization as a school does better assure the
necessary status and the financial support such a program needs.

It is not surprising then to find that in the last report year, five
schools note the appointment of an administrative assistant to the
dean to share the ever-increasing administrative burden. Not noted
in the reports, but apparent from observation and conversation, is the
steadily decreasing teaching load carried by the deans and directors
of library education programs. Once it was assumed that the dean
would devote a considerable part of his time to teaching, but today the
deans of many library schools find that to teach more than one course
per academic year is almost more than they have time for. And when
the dean does carry a full—or almost full—teaching load, the press of

administrative responsibilities now attendant upon the deanship suggests that the quality of the teaching probably suffers.

Another phenomenon of recent years has been the great turnover of deans, and their replacement, as deanships fall vacant, by non-librarians or persons without specific experience in library education. There are several factors involved here, but at least in part this trend reflects the increasing need to seek in candidates for the deanship persons with a skill and aptitude for almost pure administration, and an interest in pursuing it. This could be one reason why the person whose first and primary love is teaching finds a deanship less attractive than it might have been a few years ago. Thus we see an increasing number of deans who resign the deanship but remain on the faculty, turning to teaching, writing and research and away from administration.

SCOPE OF THE SCHOOLS' PROGRAMS

Another readily apparent current trend in library schools is the broadening scope of their concerns. One simple and obvious indicator of this is the name of the school which, in these days, increasingly includes some term to show that information science is added to traditional librarianship as a subject responsibility. At present five schools—no longer calling themselves exclusively schools of librarianship, library science, library service, or library studies—have added information science or sciences, information services, or informational sciences to their names. But name change is only a formal acknowledgement of changes that have been occurring in the programs of all of the schools, as will be noted later in the discussion of course offerings.

Another phenomenon of current library education is the establishment of several different programs in the same school, often leading to different degrees. The separate degree in information science is typical of these, with only a small part of its program identical with that which leads to a degree in library science. Other specialities (instructional media, for example) may also have essentially separate programs, whereas in the past this would typically have been handled simply through a few electives added to a basic program required of all students in the school. This is becoming a trend of sufficient proportions to require the Committee on Accreditation to institute new procedures; once accreditation was assumed to mean accreditation of the school, but now it must be seen as accreditation of individual programs within the school, with the possibility that some programs might meet ALA "Standards for Accreditation" and some might not.

Another obvious reflection of broadened interests is the formal addition to the library school of a special facility for research or special study. In the 1968/69 report alone, there were eight schools which reported such new facilities, including, for example, an

information processing laboratory added to an already existing insti- tute for research at Berkeley, a center for communication and in- formation research at Denver, a research center for library and information science at Indiana, a center for international librarian- ship studies at Pratt, and an audiovisual laboratory at Florida State. Other schools have already had such facilities and so did not report them during 1968/69.

Another characteristic development, attesting to the broader horizons toward which the schools are looking, is the establishment of joint programs with other schools on the campus, and even with off-campus institutions. The 1968/69 reports from eight schools mentioned joint programs on campus: a degree in library manage- ment jointly offered by the school of business and the graduate library school at Chicago, for instance; or the joint curricula for media specialists now being explored on many campuses between the library school and the school of education. These are not revolution- ary developments of the last year, of course; Chicago has had joint programs with theology, business and music for years, and many library schools have had some joint listing of courses in children's literature, storytelling, and similar subjects with departments of education. But the number of these is constantly growing, and they tend to be more carefully planned and formalized than some of the arrangements in the past. The same may be said of the inter- institutional programs, like the graduate seminars offered jointly by Atlanta and Emory, for example, or the cooperative program of the library school at the University of Pittsburgh with the Pittsburgh Theological Seminary in theological librarianship. The statement on "Library Education and Manpower," which became official ALA policy in June of 1970, gives its blessing to such inter-divisional and inter-institutional programs and may give an added impetus to ex- plorations of this kind of arrangement.[2]

FACULTY MAKE-UP

Without more detailed information about faculty appointments in earlier years, it is impossible to state absolutely that the nature of the appointments in 1968/69 indicates a changing pattern. Still, one gets the impression that the academic qualifications of teaching faculties in the library schools are rising, and that a higher degree of specialization is being sought. For example, of the 121 new appoint- ments (both full- and part-time) reported for the academic year 1968/69, fifty-four had a doctorate or were close to its completion. This includes not only the Ph.D. in librarianship, but also the Ph.D. in other fields, and Ed.D.'s, J.D.'s and others as well. There would appear to be increasing attention paid to advanced degrees as a desirable if not yet a mandatory qualification for faculty appointment. But the number of such appointments rests upon the number of Ph.D.

programs being offered. It would be dangerous to assume that the doctorate is only now being recognized as a desirable qualification; the fact is much more likely to be that the need has been recognized for a long time but only recently have enough doctorates been graduated to begin to meet the need.

The appointment of persons whose qualifications are not in librarianship at all, but in another subject area, seems to be a definite trend. Sixteen schools reported new appointments with qualifications in other fields: five in data processing and computer science (as might be anticipated); three in chemistry; three in educational technology; three in psychology; two in mathematics; two in fine arts; and others in electrical engineering, archives, administrative theory, etc. The noteworthy thing about these appointments is not that this kind of specialization is represented on a library school faculty (special subject background has always been an added asset in a faculty member), but that none of these new faculty members have a library degree in addition to the specialist degree. The specific, non-library degree was deliberately sought by the appointing school, not as a useful supplementary qualification but as the key one. The evidence is quite convincing that these appointments represent the schools' desire to stress a high degree of specialization in the course content offered by these instructors. It is not, I think, a throwback to the days when we simply filled vacancies with rejects or dropouts from other fields to teach as best they could the traditional content of library courses.

ADMISSION AND GRADUATION REQUIREMENTS

The situation concerning admissions is so confused that trends are rather difficult to identify. In some cases, there seems to be evidence that academic standards are being raised: in the single report year of 1968/69, three schools mentioned an increase in the required grade point average for admission, six schools mentioned a higher general GRE score required for admission, and three schools have considerably tightened their admission requirements for foreign students. All of these steps have been reported by other schools in the annual reviews of recent years.

On the other hand, many of the requirements which have traditionally been seen as essential to the maintenance of high academic standards are now being questioned and even abandoned. Several schools, for example, have already eliminated any foreign language requirement for the master's degree, or are contemplating doing so. Others have reduced the language requirement from two to one, have made it a graduation rather than an admission requirement, have agreed to accept other qualifications (statistics, or a machine language) in lieu of a foreign language, or have made it a requirement only for certain optional specializations. Many schools are under

pressure to eliminate other traditional academic practices as well, and some have already done so. Those pressures most frequently encountered seek to do away with comprehensive examinations; to eliminate letter grades in favor of simple pass/fail, and then eliminate "fail"; to impose no academic bars to admission; and to abandon the "achievement orientation," etc.

It would be premature to interpret these tendencies as a move toward lowered standards, if one accepts the arguments put forward in favor of such changes. We do not yet have enough experience with the graduates of such programs to know whether the changes in end-knowledge and in approach will affect the quality of library service one way or the other. If they are good, they will be very, very good— but if they are bad, they will be awful.

STUDENT PARTICIPATION

Most of the pressures mentioned above come, of course, from the students. Increased student participation in policy discussions, program evaluation, and decision-making is not a phenomenon unique to library schools, but the trends in this direction certainly show that the library schools are not out of the mainstream of developments on the parent campus. In 1968/69 twenty-three schools reported the participation of students on some faculty committees; four schools reported student representation on *all* faculty committees. The committees most frequently mentioned as utilizing student members had to do with curriculum (eleven schools), admissions, the library, and recruitment of Black students. Ten schools reported the formal and continuing use of student evaluations of courses and of individual instructors; nine (not all from the same ten) report student representation in faculty meetings or on the faculty council.

The kind of move being made by any given school in the direction of student participation is a reflection, in part, of where it has already been. Two schools, for example, reported the establishment of a student organization as an innovation in 1968/69, and one of these organizations has as its function making arrangements for such social and cultural activities as teas and colloquia. That this is seen as a radical departure in this instance points up the distance between this school and some others which would consider this to be a long since outmoded Establishment device.

CURRICULUM STRUCTURE AND CONTENT

Up to this point, "curriculum" has been defined in its broadest sense to include all the experiences that a learner has during his enrollment in a school. Thus administration, faculty qualifications, admission and graduation requirements, and student participation—all are related to the curriculum, more or less directly. At this point, I will confine myself to that definition of curriculum which sees it as

the general overall plan of the content or specific materials of instruction that the school offers the student by way of qualifying him for entrance into the profession. None of what has gone before is irrelevant, for the content and materials of instruction are surely affected by all of those considerations, and in many cases affect them as well. But now I want to discuss courses, since they constitute the major vehicle through which the student gets the learning experiences formally offered by the school.

I referred earlier to the expansion in the outlook of the library schools as reflected indirectly in the name of the school and the addition of facilities. But certainly the best evidence of the widening scope of a school's attention is to be found in the new courses and new programs that are being introduced into the curriculum.

All schools, of course, are constantly making changes in the curriculum—adding courses and dropping others, consolidating the content of more than one course into a single one, or dividing a course into more than one, changing titles and revising the content of existing courses, etc. Much of this activity is dictated by considerations other than that of providing the most desirable learning experience; the addition—or the loss—of a faculty person with a particular specialty, the demands of time schedules, new trends in jargon, and other such factors influence curriculum revision as well. All of the schools responding to the annual review mentioned some alterations in the curriculum, or some kind of ongoing evaluation of the program, but it would be unwarranted to assume that this means, in all cases, revolutionary changes in direction or significant enrichment of the program. Let me refer to those reported specific changes which are most likely to be indicative of some significant trends.

In the 1968/69 review, thirty-eight new courses in the master's program were mentioned in the field of information science and related subjects. Nineteen were noted in special subject fields: eight in archives; three in area studies; two in medicine; one each in law, map, art, music, rare book librarianship and Afro-American bibliography. Sixteen new courses were introduced during the academic year in media center administration or multi-media content. Eleven new courses have to do with some aspect of the general topic of the library and social problems. Nine were added in the fields of general principles of administration and management. Services to the disadvantaged and other minority groups, methods of research, intellectual freedom and censorship, and education for librarianship represent other fields in which new courses were introduced during the year.

Fewer schools mentioned complete *programs* (not just single courses) added at the fifth-year level, but those that did reflected much the same subject emphases. They included such specializations

as medical, law, map and school librarianship; Asian studies; library management; and international librarianship. Of course the annual reviews report only the additions in a given school in a given year; programs in these areas, and others not mentioned, have undoubtedly been available in some library schools for a considerable period of time. The point here is simply to identify the subject areas which seemed to be getting special attention in 1968/69. Except for Asian studies, reflecting a comparatively new specialization in area studies in the parent institution, none of these fields is a new one for library school specialization.

One topic of current concern which has had an impact on the schools is that of responsibility for promoting the rights of the disadvantaged. It is reflected in two quite different ways: in the curriculum through courses on library service to the disadvantaged and related topics; and in the activities of the schools themselves in trying to open up library education to groups who have hitherto been discouraged, for whatever reasons, from pursuing librarianship as a career. The impact on the curriculum is seen in the courses offered in five schools, specifically related to library services to the disadvantaged, in segments of the "Library and Social Problems" courses in several schools, and in very occasional courses in some aspect of Black studies. There have also been one or two practical demonstration activities—the High John experiment at Maryland has been the most highly publicized—which give students an opportunity to work directly with disadvantaged groups as a special project in their academic programs. It seems safe to predict that interest in this area will increase in the immediate future.

The impact on the school's own activities and policies is reflected in its special recruitment efforts. Six schools reported such activities in 1968/69: Rutgers, Simmons and Western Michigan reported a special effort to recruit Black students; Maryland reported the appointment of a special Black recruiter; Pittsburgh has an Ad Hoc Advisory Committee on Black Community Relations, made up of Black students and alumni; and Illinois has its special scholarship program for members of minority groups. This too is likely to be the start of a growing pattern.

Some other changes introduced during the year in the master's level programs suggest possible trends. Beginning to appear is evidence that the program leading to the first professional degree is going to be longer in duration in the near future. Some programs are already being extended in the United States; in Canada the pattern of a longer basic program is now generally accepted. At present, four of the six Canadian schools with ALA accredited programs offer the two-year master's as the first professional degree, and a fifth is considering a move in this direction.

The recognition that library education may require more time than a single year is seen not only in the lengthening of the master's program, but even more in the experimentation with a post-master's program of advanced study, not culminating in the Ph.D. Note the use of the term post-master's rather than sixth year to designate these advanced programs. This is, in itself, an indicator of the changing scene. Two years ago, "sixth year" would have been an accurate description; today enough basic programs are longer than five years to require that the level of the program be designated by the degree or qualification to which it leads, rather than by the number of years of schooling it represents.

Fourteen schools refer to new or planned programs at this post-master's level. Not all specify a particular specialization; some are simply an opportunity for further study; some make available to graduates courses at the master's level which they may not have had time to take during their year in residence; and some will be tailored to individual needs and interests, cutting across divisional and institutional lines and introducing special seminars and tutorials as desired.[3] But all of them are based upon the premise that the librarian's professional education cannot be completely encompassed in the single year leading to the master's degree, and that some formal additional educational experience is required to cover gaps in one's knowledge caused either by the pressures of time on the initial program, or new developments since the initial program came to an end. Where subject specializations are identified, they fall most frequently into the areas of management and administration, media and educational technology, systems analysis and automation, and education for librarianship.

Ph.D. programs are also increasing. Thirty-two years ago the first doctoral program in librarianship was introduced at Chicago to loud cries of "Who needs it?" from many quarters. It took about twenty-five years for the idea to catch on, but it is certainly spreading rapidly now. Today, there are seventeen schools which offer the Ph.D., and eight of these have been approved within the last year or two, including one program offered jointly by two of the schools with programs on the accredited list. The latest annual review reveals eleven more schools with doctoral programs somewhere in the planning stage. At this level also the schools are exploring cross-disciplinary programs: four schools in the most recent review mentioned an interdisciplinary doctoral program in information science as the objective of their plans.

Despite the trend toward extending the length of the program, a concurrent trend is toward reducing the number of *required* courses. The effect of these two actions is to permit a great deal more election by the student in the areas of his concentration, and to require a greater depth of specialization than in the past. Particularly in those

schools which offer separate programs leading to separate degrees, the tendency is to reduce mandatory courses to a minimum (in one school, only one course is required of all students), and to design the student's program in accordance with his specific interests and needs. This will probably turn out to be, in the majority of cases, simply the establishment of groups of "required electives," but the accompanying trend toward greater use of courses in other fields offered outside the library school permits a greater flexibility and individuality in planning than has been the case in the past.

The course most likely to be changed from required to optional is the one dealing with the history of books and printing, and many schools are reducing to one the course requirement in classification and cataloging. On the other hand, some introduction to information science is coming into the required "core" of courses, sometimes replacing the once-popular and still widely used course in some aspect of "The Library in Society." Since course titles are often not very reliable guides to the actual content of a course, it is difficult to know just what these changes really represent. "The Library in Society" has often been simply a catch-all, introductory course touching upon everything from an introduction to the different types of libraries to tag ends of general housekeeping. In others, it has been essentially what is now newly coming in as "The Library and Social Problems." In still others, "The Library in Society" was an interim fad title for the older "History of Books and Libraries," which is now simply undergoing another title change to give it once more the appearance of contemporary relevance.

The emphasis upon more concentrated specialization is reflected in another current trend toward the development of curricula solely concerned with preparation for a single aspect of library service. This is not really a new phenomenon since undergraduate programs designed for school librarianship have been with us for a long time. The innovation is that this narrow specialization, once limited to un-accredited, undergraduate courses, is now moving into the master's level and is attempting to develop programs that, although single-purpose in intent, can still meet the "Standards for Accreditation." School librarianship, instructional media (or learning resources), and information science are the three fields which are most actively working on such programs. Some library schools, not yet ready to limit themselves to a single-purpose program, are developing a limited number of strong specializations, and are exploring the possibility of moving away from the traditional obligation of providing instruction in all aspects of library service. The new ALA policy statement on "Library Education and Manpower" paves the way for this trend with its declaration that "intensive specializations at the graduate level, building upon strengths in the parent institution or the

community, are a logical development in professional library education.''[4]

A special aspect of any library school's curriculum is the component of continuing education or extension opportunities. In public speeches and professional publications, continuing education is widely identified as a high priority obligation of the schools. A newcomer to the library field, glancing through the literature, might conclude from the demands and complaints recorded there that the schools are making little or no effort to provide opportunities for continuing education. But workshops, institutes, conferences, special courses and other such continuing education activities have long been a familiar phenomenon among the library schools, and federal funding available for institutes in the past few years has greatly increased their number. In the 1968/69 review, forty-one schools listed 114 separate institutes (from one day to one year in length), of which fifty-two* were specified as supported by HEA Title II funds.

The subject areas with which most institutes were concerned reflect many of the same emphases found in new courses and new programs. Most frequently mentioned were:

Media and related subjects (instructional materials centers; the Association of American School Libraries/Division of Audiovisual Instruction standards, non-print materials, etc.). 29

Special subject materials (including work with special audiences such as the urban poor, the handicapped, the mentally gifted, hospital and institutional patients, etc.). 19

Information science, automation, systems analysis and design, and allied topics 11

Management and administration 9

The choice of such subjects for special attention reflects not only the interests of the library field, but also the areas of major emphasis in the U.S. Office of Education. Since the latter are subject to change, it is dangerous to predict trends for the future. Now, with the cutback in federal support, the future of any institutes is subject to some speculation.

Extension activities are also a form of continuing education for many, but this is of much less importance as far as the library schools are concerned, and there is some evidence—no larger than a man's hand—that it may be decreasing in significance. Only twelve of the forty-eight schools made any reference to their extension activities, and of these, five stated that they had discontinued some or all of their extension offerings, or are exploring the possibility. On

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*This is probably a low figure, since not all respondents made clear the source of support.

the other hand, three schools mentioned plans to develop enlarged extension programs. That there is an audience and a demand for extension work is not denied by any of the schools, but some give this a comparatively low priority in the face of faculty shortages, rising residential enrollment, and the growing curriculum for the basic program.

There is the beginning also of a trend toward state-wide or regional rather than institutional planning of extension offerings. While the schools may continue to provide facilities and supervision of the programs, the initiation of them may come from other agencies.

INTERPRETATION OF THE TRENDS

It might be desirable now to look at these trends to see, not just what they are, but—if possible—what they mean. The most obvious message they convey is that libraries and library services (and therefore the training and education that provide the manpower for them) reflect the conditions of the society they serve, and that librarianship is not an isolated phenomenon but an integral part of social history. There is almost nothing that has been reported here that is unique to librarianship; we might have been describing, *mutatis mutandis*, professional education in any other field, or higher education in general, or—indeed—the social forces that affect us all.

What are some of these social forces? What are the characteristic strains in the society in this eighth decade of the twentieth century? We all know about the explosions: the information explosion, the technological explosion, the population explosion, and the explosion of rising expectations. We know that the "curse of bigness" affects every institution in our society, and our way of life. We know that the Viet Nam War has created problems of adjustment and acceptance that have resulted in a questioning of old values and of any institution built upon them, including the society itself. On every side we hear an increasingly urgent cry for "relevance," although we may not know in most instances what relevance means in the particular context. We see in every aspect of our lives a push toward change— any change. Above all, we feel a great urgency to deal with all of these matters at once.

For institutions and establishments which have as one of their major charges the preservation of tradition—and universities and libraries do have such a charge even today—the real challenge is to adjust not only rapidly, but effectively. There must be change and there is, but there is still the concern to preserve what is good, or at least less bad, in order to have some base on which to build better. We are haunted by Santayana's warning that those who cannot remember the past are condemned to repeat it. There has probably

never been a period in history which has so overworked the cliché about the baby and the bathwater.

INFORMATION SCIENCE AND THE NEW TECHNOLOGY

In the trends in library education which I have been reporting, the impact of the information and technological explosions is clear enough. Information science is now an accepted aspect of the librarian's education; I do not think there is an accredited program that does not see as one of its obligations the introduction of the would-be librarian to the implications of information science for traditional library theory and practice. Fifteen years ago, when the Graduate Library School at Chicago held a conference on *The Future of the Book*[5] there was so much resistance to its basic premise—that automation in libraries is on the way and information and communication may in the near future be sought in forms other than that of the codex—that it was necessary to add an "Afterword" justifying a library school's temerity in exploring this subject at all. Nine years later, when another conference on *The Intellectual Foundations of Library Education* proceeded on the assumption that "information science, information technology, information retrieval, and documentation will...be treated as...an integral part of library science,"[6] there was hardly a dissenting voice in the audience of librarians.

A variety of new machines has already begun to change the face of library practice, and with it the emphases in the content of our training. Let me remind the reader merely of the reduced attention to cataloging and classification because the new technology makes centralized processing really feasible; or of the growing attention to a multi-media approach to library responsibilities, once so exclusively print-oriented; or of the already widely accepted use of computers in library operations which makes some understanding of computer science essential for all librarians. The history of books and printing, once an unquestioned requirement of anyone who aspired to the librarian's profession, is now seen as an option for a limited few; however, a knowledge of such machine-oriented subject matter as data processing and audiovisual materials is now firmly lodged in the core curriculum of almost every library school.

One thing seems to be clear in the data on this point: the impact of information theory and of the new technology has not greatly altered the ultimate goals of library service although it has definitely altered the means available to us for reaching the goals. The "tool" character of the machines is slowly being recognized, and machine operations are no longer seen as ends in themselves as—at the beginning—they sometimes were. The curriculum content related to information science and the new technology is gradually being integrated into the total curriculum, informing traditional courses as well as introducing new ones. (An interesting reflection of this trend

is the fact that two of the schools on the accredited list which have been offering separate degrees in library science and in information science are now incorporating the content of the information science curriculum into the regular curriculum and are offering a single degree rather than separate ones.) It will take some time to make the necessary changes in curriculum to insure that integration, but it is on the way.

A purely subjective reaction at this point is my disappointment, or fear, or intuition that the new subject matter may be introducing much less depth and breadth than we had hoped, and that the tired old methods of teaching and application have somehow been able to survive even in the new environment. The impact of the new technology seems to have been primarily that of creating new how-to-do-it courses for old ones. The typing of hundreds of catalog cards, the running down of prepared questions to illustrate the features of reference tools—these pedagogical exercises are being laughed out of existence. But in their place we have students sitting for hours before consoles typing out predetermined code numbers, and searching for answers to prepared questions through MARC tapes instead of the books themselves. The method would appear to be as rote as ever, and the intellectual challenge—once the bloom has worn off the new and unfamiliar form of the tools—to be about the same. Checking something in the card catalog is still checking something in the card catalog, even if we do now call it "querying a store."

This probably sounds like a harsher condemnation than it is meant to be. As new ideas and concepts come in, the design of systems and the solution of problems *are* professional in nature, and learning how-to-do-it does have its challenges. But a great deal of the basic instruction of today will be relegated to a lower status once it is mastered. This process of constant change and improvement is characteristic of a true profession; the difficult thing for each older generation to face is the realization that what was once professionally challenging may no longer be so now that the routines are set. This will happen to this generation of information science experts just as, in the past, it has happened to specialists in other traditional library skills, once they had become traditional.

THE POPULATION EXPLOSION AND "BIGNESS"

In part, the move toward automation of library operations and services is forced by the population explosion as much as by the technological or information explosion. The population explosion to which I refer here is related only indirectly to the total number of persons in the country. The explosion which alters the curricula of library schools refers more specifically to that portion of the total population that goes to school, whether at the kindergarten level or at the post-graduate level in the university. Today, in the United States,

the number of persons taking some form of schooling, while influenced in part by the number of persons in the total census, is likely to increase at the advanced levels even if there should be a leveling off of the general population growth.

More and more students at all levels of education translate into more and more users of the library's services, not only in school and academic libraries but in public and special libraries as well. To meet the growing demands for information in its many forms, libraries have had to seek new approaches to traditional services, and the machine has promised—and in many cases, delivered—time and laborsaving means for keeping the records, processing the materials, and providing access to the information. Thus library school curricula will have to continue to prepare the librarian of the future to handle these devices and to understand their potential.

An even more direct influence of the population explosion on the library schools is increased enrollment. As the pressure of numbers grows, there must be a more efficient division of labor and a growing emphasis upon specialization on the teaching faculties of the schools. The trend toward complex administrative organization, to which I referred earlier, is an attempt to meet this challenge. However, it is not only in the administrative organization of the schools that this influence is seen, but also in the growing demand for more and deeper exploration of the principles of administration and management in the teaching programs of the schools. This mounting demand for instruction in administrative principles, particularly in post-master's courses and in offerings in continuing education, reflects the same need in the field of library practice as is felt in the schools—the need to apply more efficient methods of management and administration to a service which must meet the needs and interests of a constantly growing audience for a constantly growing body of information in many forms.

But efficiency meets only one part of the need; increasingly there is concern about the dehumanization that seems to accompany large-scale efficiency. Much of the campus unrest and student disenchantment began with the growth of the multiversity and the feeling on the part of the student that he was being reduced from a person to a number, and being treated as though he were a punched card. Library schools are still small enough to escape the worst of this problem, but recent student evaluations have come up with evidence that even here the remoteness of the administrator from the student is being felt. "Does the dean really exist, or is he only a fiction?" has appeared as a commentary, if not a real question, in several student evaluations of their library schools.

How to grow larger (which the population explosion requires) and still retain the benefits that come from a smaller and more intimate organization is the question that faces all of American higher

education. The library schools, like their parent institutions, have tried to answer the question in part through increasing the number of faculty members, and providing means for more direct student participation in the affairs of the school. But as the schools continue to grow in enrollment, these devices may or may not continue to be effective. Qualified teaching faculty are still in short supply (as is the money to support them), and student participation itself can grow inefficient and unwieldly as the number of students increases. At the moment, the schools report increasing enrollment and expansion of programs as a plus factor in their annual reviews, but it is possible that a day will come—as it has for most American cities and many universities—when continued growth will be seen as a bane rather than a boon.

That day, in a way, is already here. Within the past year, there has been a mounting concern expressed about the tightening of the job market in all fields and—characteristically—the field of librarianship reflects some of the general trends. Several library schools have noted a saturation of the job market in their specific geographical locality which has made it much more difficult for recent graduates to find the job they want in the place they want. As yet there seems to be no evidence that the overall need for librarians is completely met, but there is evidence that the day when the library school student had to beat off eager recruiters is past. Some schools are finding it necessary to discourage enrollment of students who, for one reason or another, must remain in a particular locality. Much more flexibility is now demanded of the recent graduate in librarianship than was true only a couple of years ago. If this recession should continue, and if the shortage of openings in other fields sends students with master's and even doctor's degrees from those fields into library work, the schools may become even more restrictive in their admission requirements and more selective in their recruiting. Whether this is only a short-term trend, whether the market will once again become as wide open as it recently has been, depends on factors outside of librarianship and the library schools.

THE QUESTIONING OF VALUES

Meanwhile, good times or bad, traditional values are being called into question, and the most obvious evidence of this lies in the current unrest and demands for change on campuses across the country. At the beginning, many people thought that this kind of student dissent was simply an undergraduate phenomenon, limited to students in the humanities and the social sciences who had not yet settled upon their career choices, and that it would never reach up to the graduate level, and certainly not to the professional schools. We now know better. The tradition—the Establishment—is under attack on all levels, and the reports from the library schools reflect that fact.

Mention has already been made of the changes in admission requirements, the abandonment of letter grades and comprehensive examinations, the shift in emphases in the core of library education, the move away from predetermined requirements and toward individually tailored programs, and the increasing attention to student participation in the decision-making activities which were once solely the responsibility of the library school faculty. All of these reflect a challenge to traditional values which amounts almost to culture shock for educators and administrators who are used to the pattern of the past. But the changes *are* occurring, and the association's acceptance of the policy statement on "Library Education and Manpower," which supports many of the challenges, suggests that reform—if not the revolution that Harlow advocates in his paper—is acknowledged by librarians generally as a priority for the profession.

In this connection, one rather disappointing aspect of the reports is the absence of much in the way of research into some of these matters. It must be acknowledged that there is more research overall than has been true in the past, but there was hardly any direction to go but up in this respect. What does not yet appear in the reported research is an examination of the assumptions which underlie either the tradition on which the pattern of library education is based or the attacks upon that tradition. The assumptions of both the traditionalists and the dissidents might well be seen as hypotheses rather than assumptions, and some research is badly needed on both sides of the many controversies over library education.

RELEVANCE

The challenge to traditional values usually is based on the claim that they do not today have relevance. The attacks on education in general, and library education in particular, often feel obliged to make no more specific indictment than that. "Relevance to what" is seldom defined, although the context sometimes suggests the nature of the complaint. When an anti-war group, a Black Power group, or the Women's Liberation movement challenges the relevance of a curriculum, one can usually assume that they are asking for more course content in support of their particular cause. When a practitioner from the field raises questions about the relevance of the curriculum, he is likely to be attacking what he considers to be excessive attention paid to just such social causes rather than to the skills of library practice.

Things would be a lot simpler if the conflict split neatly at age thirty or some other simple marker that would help to categorize the nature of the disagreement. But many of the young and presumably idealistic dissidents are just as pragmatic as the older traditionalists are supposed to be, and many of the older generation hold romantic views of the ideal role of the librarian that are truly revolutionary

when compared to current practice. The new relevance frequently turns out to be simply utilitarian in its aims: learning only that which one needs to know to handle the specific task confronting him. The objection to the foreign language requirement is simply that one can get along without it; it is more "relevant" to learn the language of the streets in order to work with certain new audiences in certain kinds of libraries. The denigration of purely cultural values, of the mastery of humanistic disciplines, of the value of background, or precision, or academic standards is pragmatic. Mastering the hardware is often, as I suggested earlier, the new relevance.

The library schools, as our reports have shown, tend to meet the charge of irrelevancy by adding individual courses which use in their titles the terminology of current problems. "The Library and Social Problems," "Library Services to the Disadvantaged," and "Intellectual Freedom" are examples which illustrate the sensitivity of the schools to the pressures of the times. Joint programs and specializations reflect the same concern with meeting the challenge of relevance. I do not mean the tone be snide; these are usually sincere efforts to relate the library's services to the needs of its current or potential users. It would be a poor library school that failed to inculcate in its students a sensitivity to the interests and needs of the library's publics.

The changes we have already mentioned in relation to traditional values also reflect the concern with relevance. When a standard procedure is abandoned—comprehensive examinations, for example, or the foreign language requirement—the justification is that it is no longer relevant to current professional needs.

But in the rush to surface relevance, the schools have often failed really to meet the deeper challenge. Simply to retitle an old course with new terminology is not necessarily to change the content in any significant way. Simply to add a course in a new subject without relating it in any way to existing courses is not an adequate assimilation of the intellectual contribution of the new concept to library education and thinking. Simply to close up shop for student strikes, or to pass out "pass" grades where no student work has been turned in, or to give academic credit for nonacademic activities reflects a superficial analysis of what relevance means in higher education.

The schools are struggling with this problem, and few would pretend that they have completely solved it. But in the struggle, and even with the errors and misjudgments that inevitably have come under immediate pressures, the schools may be coming to a clearer definition of their real objectives, and the relation of curriculum content and teaching method to the attainment of the objectives. Theoretically this should have been the first step, even before a library school opened its doors to its first students, but in practice the courses have come first, and the rationalization after the fact.

Even today, the statements offered by many of the new schools or by programs aspiring to accreditation reveal the same sequence. One would have thought that a firm statement of objectives was a *sine qua non* for any prospectus, but a check of fifty-two library school catalogs shows only twenty-five have a statement of objectives that could serve as a guide to evaluation of the program offered, seventeen others list as their objective simply the training of people to work in libraries, and ten make no statement whatsoever about the aim of the school. This may not be what the dissidents mean when they cry for relevance—but relevance, as I would use the term, is certainly involved here.

RISING EXPECTATIONS

A major social issue with which all education should be concerned is that which turns its attention to that portion of the society which has been deprived of its rightful share of the benefits and advantages of the society. In our time and place, the guarantee of the right of the Black community to share in the goods of our society has finally come to the fore as a primary social concern, and we are now even beginning to recognize groups, other than the Blacks, who seek the rights from which they have systematically been deprived. We have seen how this belated awareness is reflected in the admission programs of the library schools and the curriculum which will prepare librarians for libraries of the future where, it is hoped, such rights will be assured. But let us look at the educational as well as the social implications of these developments.

The drive to recruit more members of disadvantaged groups may well have an effect on curriculum content. One of the areas in which many prospective recruits are "disadvantaged" is in educational background and readiness for graduate study. Thus any effective recruitment effort must consider developing more flexible admission requirements, must investigate the need for tutorial or remedial course work to provide essential background that is lacking, and must explore the provision of course content that relates specifically to the experience of the disadvantaged groups. Several of the schools are considering these kinds of changes although, as far as I know, none of the schools is ready to alter graduation requirements. Recruitment from disadvantaged groups will make possible admission to the program and will provide means to meet graduation standards, but the degree will continue to represent completion of a certain program of study at a level of performance that is the same for all students. I am not prepared to question the logic of this approach, but there are many who are, and it may well be that library school curricula—indeed, curricula in every aspect of formal education—will soon be taking on new dimensions undreamed of only a few years ago.

THE PRESSURE OF URGENCY

The need to move quickly in the direction of change cannot be denied. The inadequacy of the "all deliberate speed" approach has been clearly demonstrated. But long-term planning—and certainly an educational institution must think in long as well as short terms—requires not only speed but deliberation. As one looks over the annual changes reported by the library schools he sees some that are disturbing: the new courses named to reflect today's jargon; the elimination of long-established procedures which, if they do represent something of value, can be reinstated only after a generation or two of students have been deprived of the benefits; the faddish devices which, by the time they are introduced, are no longer what is wanted; the substitution of action, any action, for thought; and the tendency to substitute one stereotype for another, and to accept slogans rather than ideas. To go wrong in new ways is not necessarily an improvement.

I still believe that an institution of higher education should be concerned with higher education, and that anti-intellectualism is a contradiction in terms on a university campus. I am prepared to acknowledge that the university (as I understand it) is not a suitable place to learn many important things, and that a university therefore may not be a relevant institution for many people. But this is an essential characteristic of a university: it is not all things to all men, but a specific thing to those who want what it uniquely can offer. So my criticisms here reflect my prejudice, and if the reader does not share it, he may find these comments unacceptable.

Many of the changes being introduced specifically into library schools suggest that a major criticism of library education may be quite incorrectly stated. It is not true that library schools are indifferent to the changing society; rather, the fault of the library schools seems sometimes to be that they are too indiscriminately sensitive to each new challenge. I do not deplore the introduction of new content, new teaching methods, and new approaches to learning, and I do not defend the status quo simply because it is the status quo. I do not resist change simply because it is change, but I do deplore change simply for the sake of change, without some attempt to determine whether the results may be even worse than what we are trying to correct. I also deplore especially the unthinking and unexamined acceptance of innovation by those who call themselves educators and thus by definition set themselves up as examples to others. I agree that all students should be free—also encouraged and required—to question and challenge what is presented to them, and since I also believe that educators have much to learn from those they presume to educate, I humbly suggest that in that relation the teacher is the student, with an equal obligation to question and challenge. It is this that some of the schools, under a greater pressure than ever before to move quickly, have failed to do.

But that is changing. The trends that now appear in the annual reviews of the schools are beginning to reveal a return swing of the pendulum. The schools reacted immediately and, in some cases, extremely to violent challenge. They hurriedly applied piecemeal patchwork instead of examining the basic structure, and accepted nonintellectual and nonacademic reasons to alter what I consider to be an intellectual and academic entity. But now, many of the surface innovations are being reexamined, and where they point in desirable directions, are being made an integral part of the curriculum and not just a tacked-on incongruity. Overall objectives are being reviewed and changes are being introduced because they promote the objectives and not just immediate concerns. And what is valuable in the criticisms—and not just the noise—is being listened to.

Constructive change is coming about, and some of it admittedly is coming about only because urgent pressures forced a reexamination of long-accepted practices. But the key is examination—of the old *and* of the new, of the tradition and of the innovation, of the demands of the young as well as of the conventions of the old. And most important of all, the library schools are demonstrating that they are capable of combining thought and action, speed and deliberation, and change and tradition to come up with something better, constructed out of the best of both the new and the old.

The trends, despite all my criticisms, could be promising.

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GENERAL PRINCIPLES OF

CURRICULUM CONSTRUCTION

Delving into this subject brings to mind a number of sayings from the past that must have been generated by people discussing curriculum construction, for example, "new lamps for old," or "the blind leading the blind," or perhaps "fools rush in where angels fear to tread." Curriculum planners would insist that the most appropriate saying is that "it is better to light just one little candle than to curse the darkness." In any case, curriculum construction is a thankless task. Nobody likes a curriculum planner—not even other curriculum planners. Perhaps disliking the curriculum planner is just a convenient way of rationalizing the massive resistance to curriculum change that occurs at every level of education. Certainly it is symptomatic of our frustration in grappling with the massive task of developing a curriculum that actually does what we want it to do.

In the discussions during the planning of this conference I agreed to review and synthesize generalizable conclusions and findings from major studies of elementary and secondary school curriculum construction, on the assumption that these conclusions would be broadly applicable at any level of education. As it turned out, my exploration eventually covered not only all areas and levels of curriculum, but also the related areas of learning theory and curriculum evaluation. This did not surprise me, since it is almost impossible for me to take a hard look at a portion of a system without looking at the entire system, and indeed, perhaps some of the interrelated systems. This instance was no exception.

The first and most basic statement that must be understood before launching into the subject is an astonishing one. As Henry J. Otto points out, "No one has ever attempted to provide comprehensive data, even on a representative sample basis, of instruction in [public] schools *as it actually takes place*" (emphasis added).[1]

We must understand, then, that what we read about curriculum evaluation, including this paper, is based, for the most part, on *assumptions* about what is taught or from inspections of small, fragmented, isolated instances and inferences about the field.

Nevertheless, there is real agreement about one thing—curriculum content is not much different today from what existed in the schools of the 1800s. The last major change in public school education, for example, was the addition of vocational education in the early years of this century. Virtually all the subjects taught now in public schools were taught in 1920.[2] Lee has suggested three critical ways in which educational goals are in transition: "(1) the change from personal aims and needs of students toward meeting broader national needs; (2) from the broad commitment to psychosocial development of pupils to the cultivation of intellectual power and the understanding of the disciplines; and (3) from a conception of education as having a fixed beginning or end to education as continuous and endless."[3] Otto pointed out, however, that Lee's suggestion could not have materialized, because if it had "the percentage of non-promoted pupils should have increased (which it did not), the percentage of the eligible age group entering high school should have decreased (the opposite happened), and the percentage of the eligible age group graduating from high school should have decreased (the opposite happened)."[4]

G. L. Oliver says: "Curriculum design [is] a crude technology. The early efforts at social science theory building in education and training have been notably unsuccessful. . . . They are not scientific but normative and prescriptive—based upon common wisdom rather than on empirical science; they are not appropriate for the control of value-directed human behavior; and, most important, they fail to produce the sort of pragmatic payoff associated with [hard] technologies."[5] Westbury tells us that "curriculum and evaluation are vague concepts and it is far from obvious what can be made clear by the juxtaposition of ambiguities."[6] He goes on to point out that although rarely recognized or evaluated as such, claims for curriculum change and reform made by means of appeals to socially derived ends are often the most persuasive sources of change within educational institutions. Nevertheless Abbott and Eidell find that "on the whole, educational organizations have so far effectively resisted the adoption and institutionalization of radically new instructional materials, processes and arrangements."[7] Calfee adds that "it has proven much easier to assign grades to *students* than to *curriculum designers* and *teachers*. . . . Theories of curriculum design have tended to be more *content oriented* than *behaviorally oriented*."[8] But Geis reminds us that "a mere restatement in behavioral terms of irrelevant educational objectives will not produce a marked improvement in education."[9]

Branson says that "current educational experiences are presumed, on the basis of impressionistic data, to contribute to the satisfaction of ultimate criteria. Yet, if one identifies appropriate behavior in an adult and attempts to trace its origin to specific school experiences, there is virtually no reliable data to support such connections.

Further, if one identifies a specific school experience, then tries to project the influence it will have on remote behavior, again there is little, if any, acceptable data.''[10] Caplan has gone so far as to question our ability to prove statistically the main effects of any currently used educational or instructional variable![11]

In one sense it would be comforting if I could stop at this point and suggest that these are problems every educator has faced for generations but because we can bring new technology to bear on the problems we will soon have them licked. Unfortunately, this is not the case. Technology itself, and especially the accelerating rate of change, has compounded the problems manyfold. In fact, many of us are already suffering from "future shock." Toffler feels that the impact of future shock is greater than cultural shock because the visitor to a foreign country can comfort himself with the thought that he may return to the familiar environs of his own land. This is not possible to the sufferer of future shock.[12]

We used to view time as a river. The past was upstream around the bend and the future was downstream in the morning mist. We know what the past looked like, but could not see very far into the mists of the future; nevertheless, we floated slowly downstream, always able to see just enough to adapt comfortably to changes as they occurred. Today we live on a different part of the river. Here the current is swift, the mist has lifted a bit (perhaps too much), so we can see many divergent paths ahead. As we rush headlong into this future crammed with half-seen and partially comprehended potential, we realize that the tide is somehow running backwards, for the future seems to be crowding the present with stimuli that must be dealt with now—mediating our present plans and actions in a way that would have been unthinkable a generation ago.

As I indicated in the preface of *The Impact of Mechanization on Library and Information Centers,* "The wave of the future is not only here, it often threatens to swallow us whole. Those on the firing line are unfortunately NOT the systems designers, NOT the hardware and software manufacturers, NOT the programmers, NOT the administrators who ordered the change. The front line troops are librarians and information specialists who must satisfy their users in spite of the system (and satisfy themselves that they are, in fact, satisfying the users).''[13]

What are the parameters of this process of curriculum development? As I characterized it to a group of medical practitioners:

We are all familiar with the usual slipshod method of teaching, especially in continuing medical education. We decide what is to be taught without reference to those who are to be the students, mount an action program, spend a lot of time, effort and money, and finally after a couple of years decide we'd better take a look at the results. Unfortunately, it turns out there is no way to really

measure results, so we ask the participants if they liked the program. They all say yes. But having noted that the attendance has dropped way off, we now redouble our efforts, and go all out with the same action program as before. Another year passes. The program is still unmeasurable, the attendance has again fallen. The classic reaction at this point is for the executive director of the program to leave.

What should have been done instead? We should have pretested the knowledge of the participants, set up goals in behavioral change terms that can be measured, decided on a way to train to meet those goals that takes into account who the participants are, measured behavior change at the end of the program, and hopefully, followed up a few months later to see if the participants have actually incorporated the new behaviors into their jobs.[14] Tyler said it more succinctly but less completely when he urged educators to establish educational purposes or goals, select educational experiences that are most likely to lead to goal achievement, organize these experiences to make them readily available and deliverable to learners, and determine the extent to which the goals are attained.[15]

What generally happens when we set up a new program—presumably based on these "simple" principles? According to Miles, many programs set up within a larger system fail because the change or innovation is perceived as creating too much disequilibrium in the system, thus preventing it from meeting its obligations in a well ordered manner.[16] Goodwin Watson reminds us that a change in teacher-pupil relationship is likely to have repercussions on teacher-pupil interaction, on parent-principal contacts, on pressure groups operating on the superintendent, on board members' chances for reelection, etc.[17] Any estimate of resistance which considers only the persons primarily and centrally concerned will be inadequate; repercussions elsewhere may be even more influential in the survival of the innovation.

If there are such problems at the local level, how about the larger scene? What will happen to the student who takes what he has learned from a local program based on local objectives into the world of current reality? Geis suggests that not only may the student not be rewarded—he may be actively punished in the performance environment. Incompatible and more rewarding behaviors may be available to him, or the stimulus conditions may be markedly different from those obtained during acquisition.[18] In fact, examination of the performance environment may lead to changes in that environment which will eliminate or reduce the need for instruction. We must also direct attention toward the maintenance of the behaviors we want to see continued in the performance environment. It has been a long time since learning psychologists believed that behavior could be

stamped in, as cattle are branded. The learning environment may be used to establish behaviors but the performance environment determines whether or not these behaviors will be exhibited. We have long known that a major drawback of sending people out for training is the fact that they come back to an unchanged environment—in fact, usually to a hostile one, due to the resentment of those in the work group who were not chosen for the "vacation."

So far, we have considered some of the problems the learner may encounter, assuming everything went as planned during the learning stages. Suppose this were not the case? First we must talk about a two-edged, first-last step in the process—goal setting-evaluation. The two cannot be readily separated, for judgments enter into the picture before the program is even designed. What is involved in setting goals? We generally start out by talking about what students need, usually forgetting that to describe need is not only to describe the behavior but to describe the person asked. Judgments enter into the decision process as inputs, not just in the evaluation phase.

As Oliver noted:

First of all the curriculum designer seeks to identify, in considerable detail, the *demands* of the social milieu, the subject matter and/or the learner himself....Having derived such a set of dependent statements, [the designer must then work back to] a set of independent events for instruction. This set of independent events he expresses in terms of the institutional, material, and/or human capabilities that are required to meet the above demands. ...the designer [must then generate] a set of instrumental procedures that describe the means by which the institutional, material and/or human capabilities are to be implemented.

. . . .

These rationales and related techniques have, however, drawn a good deal of criticism, for the following reasons: They are, at best, based on unrelatable and value-laden statements of the beliefs and attitudes of a limited number of experts in a given subject matter field. In many instances, they are based entirely on rationally derived rather than hard empirical data. Parochial in their preoccupation with specific occupational or disciplinary issues, these rationales and techniques fail to generalize to the needs of the curriculum field as a whole. They are not subjected to rigorous programs of diagnosis and assessment, designed to establish their empirical validity. They lack descriptive and analytical sophistication in the manner in which their various dimensions are identified, analyzed and ordered. And, most important, they are not, in general, based on any comprehensive theoretical position as to the nature of education, training, curricula, or instruction. The result, especially in this latter condition, has been the proliferation of a number of unrelated and

unrelatable rationales and techniques—that have left the field without a viable conceptual structure upon which it can build.[19]

The key question at this stage in the development of curriculum is not *how* curriculum events ought to be identified, described, analyzed and ordered, but *what* curriculum events ought to be identified, described, analyzed and ordered. Researchers are becoming increasingly aware that little evidence connects the typical criteria of program success, such as high achievement or good deportment, with their presumed adult consequences, better jobs, higher pay, etc. The one major study relating the years of school completed to occupational status shows that once inherited status is controlled, the years of school completed are only moderately related to adult occupational status. Other studies reveal no direct relationship between intelligence and occupational status, but they do show that the education-occupation relationship is much weaker for blacks than for whites.[20]

As Berlak asserts, one cannot derive an *ought* from an *is*![21] We cannot use the scientific approach to resolve ethical issues. No set of descriptive statements can entail an evaluative statement without the addition of at least one evaluative premise. Berlak goes on to suggest that in order to identify a set of core ethical values of American education, and through a process of argumentation by analogy, to establish relative priorities among conflicting moral values for the program under consideration one would have to make judgments in each individual case. I would see the resolution of this value conflict as a proper function of all those involved in the learning situation, that is, students, teachers, administration, and the performance environment. Thus a choice might be necessary between "cooperation among individuals and groups" and "individual choice in the development of one's interests," both of which are basic values in American education. Today these choices are largely made by those who control the pursestrings, and not by students, teachers, administrators, or in a direct sense, the performance environment.

Moving on from the question of setting goals and establishing priorities, we discover a great deal of current concern about translating these goals into statements of desired behavior that can be measured or assessed before and after the training takes place. Mager, in his book *Preparing Instructional Objectives*, identifies the three steps in specifying objectives as follows: 1) *an action*—what the student is supposed to be able to do when he is evaluated (communicated by such action words as identify, list, name, describe, construct, order, contrast, demonstrate); 2) *a context or signal*—the conditions under which the student will be evaluated, which might be stated or implied in a phrase frequently beginning with the word "given"; and 3) *a criterion*—the level of performance expected of the student, in which quality and/or quantity expectations are stated. Mager said "Selection of objectives may be made in the presence or

absence of information or wisdom, in the presence or absence of clearly defined alternatives, and in the presence or absence of information about implications associated with the selection,''[22] a bald reminder that restatement of goals in behavioral terms is no panacea.

Nevertheless, behavioral objectives are a potent weapon for fostering the use of full human potential to strive for individual effectiveness. As Geis said:

Having thus made explicit and operational the behaviors represented by the shorthand of component analysis, the designer has a tool which allows him to determine the validity of his analysis so far. He can try out his criteria on master performers. If they are not able to emit some of the behaviors in the performance criteria test and yet can produce the results desired the designer should reconsider those criteria. (Of course, that a master can execute a required task is no absolute guarantee that it is a necessary behavior.) The first important consequence of the creation of a performance criteria test, then, is the validation of the criteria themselves. We would expect that as he developed the performance criteria and examined the results of tests of the performance criteria on master performers (i.e., validity checking) the designer would repeatedly re-examine and revise the analysis and design emerging.

Having developed adequate test instruments, the designer may find an alternative to instruction by using those instruments as selection devices. ...It is often more economical, and sensible in other ways, to select rather than to teach. ...A third use of performance criteria is as baselines against which the effectiveness of any treatment, instructional or non-instructional, may be measured. ...The last use of performance criteria is as end points for treatments.[23]

Another point to check is the performance environment—sometimes the "jobs" can be redefined in terms of the available population, or appropriate behaviors may be available in members of that environment but for one reason or another they are not called out or supported. Knowledge is what people have—execution is what people do. Thus it may be a matter of *can do and won't* vs *can't do*.

What of the content and technique for developing the behaviors called for in the curriculum design? To begin with, learning must proceed from where the learner is found. Research tends to show that while students who belong in the upper ranges of ability are not greatly affected by realism-abstractness of media, those in the lower ranges are. Presumably the normal course of development in maturity and learning is along the lines of greater facility in dealing with abstractions.[24] Learning, to be relevant, must deal with those interests, problems, frustrations, yearnings, aspirations, feelings,

struggles, cravings and dilemmas within each learner. "Materials for learning should be empirically designed, behaviorally oriented, up-to-date, intensive, adapted to the learner, and relevant to his environment. Multisensory approaches should be used."[25] Information *usage* must be emphasized in the curriculum rather than the mass acquisition of information. Students must be able to define problems, gather data, suggest hypotheses, generalize, propose novel solutions and reach conclusions—all based on their own "research." Such problem-solving skills can and should be developed in all subject areas. "Cost-effectiveness studies of many of the new materials and much of the new equipment for instruction indicate that the initial outlay is frequently no more, and sometimes less, than materials and equipment currently in use."[25]

While information should not be eliminated from the curriculum, the amount should be reduced. The traditional approach is essentially so fact-oriented that learning becomes primarily a memorization process. Remember that textbook learning is outdated learning. According to Burns and Brooks:

> In any decade man discovers as much or progresses as far as from the beginning of man up to the initial year of the decade. If this is true, and it requires two years to develop a textbook, a third year to get it commonly accepted in the market, and schools use the book for an additional five years (a common practice), then as much as forty percent of what we might know about a topic could be excluded from the learning at the eighth year.[26]

Human beings are problem-solving organisms. Students want to learn and will do so with efficiency and without coercion if they are given the opportunity to become responsibly involved in defining the aims and content of their learning experiences.[27] Geis even advocates giving the student the criteria and letting him instruct himself in whatever way he chooses until he meets the performance standards. Later I will mention an experimental course in library administration in which we tried this at Drexel in 1967.

Learners need to know how to learn, how to use what they have learned and how to communicate what they have learned. In a changing world the curriculum must prepare the learner for change. Rather than teaching "facts" that tell our students what the world is really like, we should help them cultivate those knowledges that help them cope with events *in their own* world.[28] Individualized instruction (which we seldom practice) includes tutoring, pupil-to-pupil assistance, teacher aids, the contract method, supplementary assignments, individualized lesson assignments, flexible scheduling, programmed instruction, television, and data retrieval systems. Equally important are psychologically structured learning, discovery methods, student-sequenced subject matter, reinforcement, stimulus control,

diagnostic techniques, learning hierarchies, feedback, multisensory methods, cueing and instruction in processes.[29]

Processes are transformational entities, such as abstracting, analyzing, classifying, equating, generalizing, inferring, sequencing, simulating, synthesizing, theorizing, or translating. Processes are extensively used in problem-solving, and therefore it is reasonable to assume that one of the primary ways by which processes are acquired, developed and become functional is through learning to solve problems. One of the curriculum designer's most important tasks becomes that of helping students have experiences that permit them to work with ideas—both in terms of understanding and of anticipating change. Perhaps nothing is more likely to stimulate the learner's thinking about man's personal involvement in planning tomorrow today than his participatory experimentation with ideas.[30] Also the learners need to be aware that problem solution will always involve the experiential background of the participants, their perceived roles in the situation, and their perception of the dynamics of the developing situation as it evolves through time, as well as the "facts" in the situation.[31] We should also help the learner realize that problems always have alternative solutions, each with different trade-offs and payoffs.[32]

Those interested in curriculum development have not finished the job when they have packaged a cognitively valid and consistent set of materials. They must establish, in addition, how these materials are operationally introduced in the classroom environment, otherwise they will be left with certain unqualified assumptions as to how their package is unwrapped in the classroom.[33] Teachers are much more important than curriculum as a factor in the quality of education. A course, no matter how cut and dried or overstructured it may be, is always to a large degree an expression of the individuality of the teacher. Its long-range consequences result largely from the quality of interactions between student and teacher.[34]

A major and well wrought study by Herron showed indirectly how a teacher's misunderstanding of a program might be caused, might affect teaching, and thus might militate against the effectiveness of a program. He asked the following questions: 1) To what extent is the "scientific enquiry" objective of the new CHEM Study chemistry, PSSC physics and BSCS biology programs actually embodied in the materials produced? 2) How do teachers through whom the materials filter perceive this objective and do they understand "enquiry" well enough to operationalize any conception of what it might mean in their classrooms? and 3) How does this objective compare to the explicit and implicit goals which teachers set in their classrooms? Although the teachers had been attending workshops on the new materials, they were found to have almost no conception of what might be meant by a claim to teach the "nature of scientific enquiry."[35]

In only one study, the oral language program disseminated by the Southwestern Cooperative Educational Laboratory were "performance standards"[36] set for the teachers using the program. Teachers unwilling to accept the standards had the right to stop using the program; they could also attend special in-service workshops, but ultimately, if unwilling or unable to perform, they were *asked* to stop using the program.

How is it possible to know whether or not teachers carry out the requirements of a curriculum? Worthen used students as observers of teacher adherence to a specific instructional model.[37] Rosenshine suggests that evaluators might most often identify the objectives of the program, study the instructional materials, then identify the critical behaviors in the implementation of the program.[38] Unfortunately few if any developers of observational systems seem to make use of such variables as "organizers," relevant practice, promoting learner interest, prompts and fading techniques, organization and sequence, and pacing; all of these have been studied in laboratory situations, using meaningful verbal materials, but in situations in which the instruction was mediated by written materials, films, and audio-tape recordings.

Four major uses of observational systems are: 1) assessing the variability of classroom behavior either within or between instructional programs, 2) assessing the agreement between classroom behavior and certain instructional criteria, 3) describing what occurred in the implementation of the instructional materials, and 4) determining relationships between classroom behavior and instructional outcomes. The disadvantages of using rating systems are summarized by Mouly. They include the halo effect, the error of central tendency, generosity or leniency error, and the lack of a common referent for scoring calibrations such as "excellent" or "seldom."[39] Also, high inference items are difficult to translate into specific behaviors.

In observational technique at its current state of development it is difficult to distinguish between relevant behaviors and irrelevant ones. Category systems have become very popular in descriptive educational research and in teacher training because they offer greater low-inference specificity and because an "objective" count of a teacher's encouraging statements to students appears easier for a teacher to accept than a "subjective" *rating* of his warmth. The major disadvantages of category systems are the cost of using observers and the difficulty of specifying behaviors before they can be included in a category system.[40] There is also a need for measuring treatments along some meaningful dimension and a need to know whether the intended treatment was carried out. In addition it is important to eliminate the effect of the observational process.[41]

Menne has studied various means of evaluating or describing the milieu within which the educational program occurs, including: 1) techniques that measure the environment in terms of objective institutional characteristics, 2) perceptions which students have of their environment, and 3) descriptions of the environment in terms of observable student behaviors. He concludes that ''when the study envisions an environmental manipulation the perception approach is preferred.''[42] Most educational programs would involve manipulation of the environment. This is a reasonable conclusion considering that our concern is with how the environment is perceived rather than with what the environment is in some objective sense.

As a matter of fact, perhaps the ultimate check on the classroom environment has been suggested by Postman and Weingartner who exhort educators to develop methods of helping our students devise ''shockproof crap detectors.''[43] They, of course, were thinking about tools for students to use *outside* the halls of ivy, but they are equally valuable inside.

One final point needs to be made about implementation of the program before we move on to evaluation (thus coming full circle). It would be unrealistic not to mention the two areas that together provide 99 percent of our rationalizations for not doing a superb job of curriculum development, viz., cost and availability of personnel. The support costs of the innovation must be projected before development begins. This should include the cost to the performance environment if the development does not take place, as well as the expected longevity of the innovation. Personnel must be available to help the learner maintain the behavior in the performance environment as well as to teach him in the first place.

The continuing need to exhort developers to evaluate, and the lack of enthusiasm on the part of evaluators to judge may be reflections of the soft-heartedness and soft-headedness that Jackson[44] claimed is a general trait of elementary teachers. Westbury comments that if Jackson is correct and his judgment can be extended to other educational personnel, it does much to illuminate the unwillingness of developers and evaluators to come to terms with the consequences of rationally directed judgment and appraisal.[45]

Crittenden suggests that the stated goal of a program should be treated as a claim for a program that can become a program-specific, yet general, criterion that defines the terms of an evaluation. This criterion is then systematically explicated to produce a set of formally derived descriptive categories that allow a program to be approached through its parts.[46] Evaluation can then make two kinds of judgments: 1) a category is or is not treated, and 2) a category is adequately or inadequately developed. Many other judgment data-gathering instruments are available: surveys, scaling, Q-techniques, use of expert review, semantic differential, and content analysis.[47]

Few investigators examine empirically the relationship between values, objectives, and priorities.

As Cohen indicates, we should question the intellectually fuzzy single-mindedness of much educational evaluation.[48] Educational evaluation generally has not grasped the diverse and conflicting nature of social action goals within its programs and therefore produces unrealistically constrained views of program aims. The evaluation of social action programs in education is political, an effort to measure social and political change—difficult at best—impossible when the activity is not seen for what it is.

Evaluation produces information which is at least potentially relevant to decision-making. Decision-making, of course, is a euphemism for the allocation of resources—money, position, authority, etc. Thus, to the extent that information is an instrument, basis, or excuse for changing power relationships within or among institutions, *evaluation is a political activity*. The politics of social action programs produce two sorts of evaluation problems. Some are conceptual—the programs' nature and aims have not been well understood or adequately expressed in evaluation design. Others are practical—the interested parties do not agree on the ordering of priorities which the programs embody. As a result of the first, evaluation is misconceived; as a result of the second, evaluation becomes a focus for expressing conflicting political interests.

A relevant measurement system for the social action content of programs would involve a census of social indicators of schools and schooling covering three realms: 1) student, personnel, program, and fiscal imputs to schools; 2) several outcomes of schooling, including achievement; and 3) temporal, geographic, political and demographic variation in all categories. This census would have to be made on a regular and recurring basis.

All educational programs contain public policy issues and could cause disruption if a citizen group made waves. Berlak demonstrates this assertion: Suppose a school board evaluates the outcomes of its recently established vocational high school.[49] The narrower questions might include: Are manpower needs in the local communities being met? How well have the students mastered the intended occupational skills? Are the graduates of the program being employed in positions commensurate with their training? The broader questions might include: Will a vocational high school separated physically from the comprehensive high school rigidify social class distinctions and reduce mobility? Will a dual high school system reduce communication and increase misunderstandings between the college educated and the blue collar workers in the community? Sets of broader and more limited questions can be generated for evaluating a mathematics curriculum, a student entrance examination, or virtually any educational program.

Some typical public policy questions that relate to any educational program would include the following: 1) Does the program directly or indirectly alter the power relationship between the citizen and the state? 2) Does the program affect immediately or in the long run the status a person has and the power he can exercise within the social system? To alter or to attempt to alter an individual's status or power with respect to any institution or group is to expand or contract his freedom to exercise alternatives, e.g., his ability to earn a living. 3) Does the program have any effect which tends to increase or decrease political or social tensions? and 4) Does the program effect a change in the self-concept or sense of self-worth of the students?

If this harping on public policy overtones to curriculum planning seems overly long, let me cite a few reasons for my concern. We are on the threshold of being able to exercise heretofore undreamed of control over the learning process. Those who are familiar with Wolpe's[50] behavioral theraputic technique for desensitizing phobias will be interested to learn that Lang[51] is now in the experimental stages of automating Wolpe. Early results show that this on-line computerized presentation of stimuli associated with the phobia and adjusted according to the patient's pattern of response is just as effective as using a live therapist. Psychologists are already looking to the day when this technique will be effectively adapted to other psycho-pathological processes.

A New Jersey company, Automated Instruction, Inc., has developed a system for teaching typewriting by reflex conditioning. This company has found that it can guarantee that 90 percent of its students will learn the typewriter keyboard in *four* hours and be able to type forty-five words per minute in *six* hours of additional training!

The control of human behavior is as much a "sleeper" issue today as the ethics of the atomic bomb were during the heyday of the Manhattan Project. We are experimenting with drugs, computer programs, biological transplants and gene and chromosome manipulation, all to the end of controlling behavior, intelligence, and learning patterns. In October 1969 a symposium at the National Institute of Health explored some of the prospects and social consequences of biomedical research that are directed primarily toward the control of human behavior. The major concern was with the rapid pace of development of new techniques without any attendant national concern about the implications of these developments. Few educators are even aware that the major frontier of education may already have shifted into the biology laboratory. We appear to be taking no effective action toward establishing a national body in the form of an advisory council or other type of interdisciplinary group to help both the professional and the lay citizen keep abreast of developments in this area and hammer out ways and means of dealing with the

implications *before* they become a national burden similar to the nuclear burden. Townes reminds us that mankind consistently errs in the direction of lack of foresight and imagination.[52]

Having brought this review of the curriculum planning scene to such a climatic conclusion, are the prospects for curriculum reform in library schools entirely hopeless? Of course not, if anything, the challenge to educate students in the techniques of coping with change should be reinforced anew by the conclusions we have discussed.

At Drexel we have been experimenting with innovative approaches to curriculum design for several years. We have introduced video tape simulation (now being used by two faculty members in administration courses and in the preliminary discussion stage in reference). This technique makes it possible to alternate theory and practice sessions, giving the student the chance, in a controlled and non-punative environment, to adapt theory to practice in a manner he finds personally comfortable, and to see for himself what it is like to be "on the firing line."[53] We have also used open-ended assignments and reading lists, and followed the practice of setting forth at the first class session just what goals the course is set up to accomplish.

In a number of different courses we have made a practice of assigning term projects that are reality-oriented, dealing with problems in the real library world, and which are chosen and dealt with by the students individually or in teams. We have also instituted the practice of having students submit reaction papers (as they feel moved to do so) on an informal basis, which the instructor reacts to, but does not grade. These feedback papers provide the teacher with another "ear," for the format allows the student to react to anything about the course, the class, the instructor or the school that he feels is relevant. A final end-of-course questionnaire provides structured feedback (everyone reacts to the same questions), covering such items as time spent on various aspects of the course, problems encountered, spillover into other courses, the reading list, restructuring the course, relation of the course to the student's prior expectations about it, attitudinal changes, good points, bad points, etc. This questionnaire is exchanged for grades at the last class to insure that neither affects the other.

We have also experimented with self-instruction at Drexel. One drawback to self-instructional course formats has been the closed structure and lack of opportunity for students to interact. Our experiment utilized videotaped problems to overcome these difficulties. Students were given a written case with related suggested readings. They responded in writing to the case, indicating issues and suggested solutions. Each student then received a composite of all student responses and was asked to defend any of his responses that deviated from the cluster responses, citing authority, again in

writing. The student then played a video tape in which the problem had been role-played by fellow students, and was again asked to write down the issues and solutions based on this additional information. Again he received a composite response sheet and was asked to defend, in a final short paper on the unit, his position vis-à-vis the group and any other information he cared to add. Students worked through five administrative problem areas in this manner. In addition they wrote an outside paper dealing with an administrative problem in a real library situation. The instructor was readily available for personal consultation during the course.

The experimental and control groups took the final examination together, which involved viewing another videotaped problem and critically reviewing the problem in writing. Final examination papers were graded anonymously by consultants. Grades were comparable for the two groups. While this particular experiment has not been reported in the literature, the author conducted a similar experiment which was reported in the medical field.

In my capacity as chairman of the curriculum committee at Drexel, I would also like to report on three new developments. We are doing preliminary work on developing a computerized simulation problem for use in library administration in the discussion of budgeting, an area in which students generally tend to get bogged down. Students will use our remote terminal in the library school to work on the computer simulation problem.

In the new doctoral program that is to begin at Drexel in the fall of 1971, an appropriate one-year supervised internship will be an integral part of the required program for the Ph.D., regardless of the area of specialization.

Finally, as part of our completely revised curriculum for the master's degree program, which begins in the fall of 1970, we have taken several steps that we hope will prove to have been steps in the right direction. We have done away entirely with required courses except for the entry course, ''Fundamentals of Library and Information Science,'' a theory course taught by the entire faculty. (Students who fail this course will be dropped from school and will not be given an opportunity to retake the course.) Total credits necessary for the degree are now variable between forty-eight and sixty, depending on previous experience. Students will be assumed to know what they want to schedule (in consultation with their faculty advisor) once they have completed the fundamentals course.

Included among the options is one that we believe to be a first in graduate school education. A group of students may, in concert with a faculty member mutually agreed upon, work together through the entire balance of their program, deciding for themselves what their objectives will be, how they will accomplish those objectives, how they will evaluate their accomplishment, and self-evaluating the

results. Students who are not quite this adventurous may nevertheless form one-time group study courses developed around topics not covered in regular courses. Individualized independent study will of course continue to be offered as it has been for many years at Drexel.

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TRAINING FOR ACADEMIC LIBRARIANSHIP: PAST, PRESENT AND FUTURE

A review of the material available on library school programs designed to train academic librarians reveals that few formal programs exist. Some schools have a reputation for training more people for one or two types of library work than for the other fields. However, when discussing the matter with faculty members from such schools one usually finds they acknowledge they are strong in this or that field but they do not see this as a school specialty. All accredited and many non-accredited schools can and do put together packages of courses for individuals interested in academic librarianship, but, to the best of my knowledge, there is no school with a formal sequence of courses planned for training academic librarians.

At the present time it is almost impossible to find an article dealing with the educational requirements for working in academic libraries without encountering some discussion of academic status. Much of the material on the topic is redundant and I have no intention of rehashing the topic in this paper. In the first section of the paper, however, I will discuss a little-known segment of library education history which may shed some light on the problem of achieving academic status. The second section will briefly summarize what the literature indicates are the educational background needs of the field. The final section will discuss a curriculum proposed by UCLA in which the needs of the academic librarian were always considered, although the curriculum is not designed just for that field.

HISTORICAL BACKGROUND

Librarians seem to have made two basic assumptions about the nature of library work and have predicated all their training upon these assumptions. The first is that the practice of librarianship is so complex that a four-year college degree, in any field, is necessary before undertaking library training. The second assumption is that a one-year training program can impart enough background to turn out graduates who will be adequate librarians. These assumptions have been basic to library education since 1924 and the appearance of the

Williamson report. No other academic or professional field operates on the basis of such assumptions.

An interesting historical footnote regarding the degree work in library science was encountered some time ago and seems to have a great deal of relevance to our discussion of training for academic librarianship. With the establishment of the Board of Education for Librarianship in 1924 the American Library Association and the profession became officially and generally concerned with the entire question of training librarians. Two of the duties of the board were to formulate minimum standards for library schools and to establish a system of credits consistent with collegiate practices.[1] In order to carry out these duties, the Board of Education consulted with the Association of American Universities (A.A.U.) about the type of programs to be offered and the degrees to be granted.

The Committee on Academic and Professional Higher Degrees of the A.A.U. was assigned the duty of making recommendations to the Board of Education. On the basis of the published record there would seem to have been some confusion about the goals of the Board of Education. It would also appear the confusion set education for librarianship in general and academic librarianship in particular off in the wrong direction and it has not yet recovered.

In the A.A.U. committee report of 1924 the following points were made about the type of training and degrees that ought to be offered in librarianship.

The degrees of B.L.S. and M.L.S. are not desirable. Degrees of A.B. or B.S. and M.A. or M.S., with or without qualifying phrase "in library science" were to be recommended provisionally until work shall have been placed on a graduate basis.

The Bachelor's degree should be granted only on the basis of usual collegiate standards, including a major, approximately one year, in library science.

If work is conducted on a vocational basis, the qualifying phrase should be omitted and the amount of work should be not more than the institution concerned would accept as free elections in partial fulfillment of the requirements for A.B. and B.S. . . . Students should be advised to take their majors in any of the humanities or in any scientific subject, and then submit their Bachelor's degrees with certificate showing one year of library work for admission to graduate study leading to the Master's degree. . . .

Two years should be required for a Master's degree. The first year should include vocational courses or equivalent in practice, and lead to a certificate. This certificate and a B.S. or A.B. should be required for admission to candidacy for the Master's degree.

. . . .

The Master's degree does not stand solely or exclusively for

research. It is appropriate for scholarly work on a graduate basis, and a thesis may often prove desirable as giving evidence of the ability to write clearly and constructively, but need not be treated as a general requirement.[2]

The committee statements seem to be very straightforward and subject to little misinterpretation. The entire report is very brief and could have been given wide circulation within the library profession. This was not the case, however, for the Board of Education for Librarianship chose to summarize the report. The summary is not a completely accurate version of the original report which cited:

> (a) four years of academic work, with a major in any humanistic or scientific subject, leading to the degree of Bachelor of Arts or Bachelor of Science as a prerequisite for admission to a professional library curriculum . . . .

> It provisionally approves the degree of Bachelor of Arts or Bachelor of Science (with or without the qualifying phrase "in library science") for four years of undergraduate work including a major (approximately one year) in library science provided this major is organized and conducted on a par with academic or professional advanced work usually constituting a major.[3]

There were a number of changes in the phraseology from the original report which created a different tone in the summary. According to the board report the summary was read and approved by the chairman of the A.A.U. committee; however, there are a number of questions raised by the entire process. Why was it necessary to create a summary since the "summary" is only fifty words shorter than the original statement? Did the chairman of the A.A.U. committee compare the documents? It would seem unlikely the contradiction between the two statements was unnoticed. The summary statement "(a)" simply does not exist in the A.A.U. document. To be able to make such a statement the Board of Education for Librarianship had to interpret the committee's use of the word "advised" as meaning "required" and the use of the phrase "leading to the Master's degree" as meaning "professional library curriculum." The literature provides no justification for such interpretation and it is difficult to understand how it was allowed.

An examination of the A.A.U. report makes it clear what the committee intended for library education: 1) a graduate program equivalent to other academic fields (two years for a field with no undergraduate foundation); 2) there could be an undergraduate program because in their view the first year program was not of graduate or professional caliber; and 3) the first year of training should not result in the awarding of any academic degree. A careful examination of the Board of Education's summary statement leaves the impression that each of the above points was very carefully avoided or thoroughly hedged. The reason for this is not clear but it seems

to have been the first step away from a program consistent with other academic and professional training.

No doubt part of the problem then, as now, was that a great many conflicting opinions were voiced about the nature and direction of library education. The A.A.U. committee appears to have thought library education ought to include graduate level training and some undergraduate training might be appropriate. It is clear, however, the graduate work was to be on the same level as any other graduate program—academic or professional. Many people in library education would agree entirely with the original A.A.U. position and yet education for librarianship has taken an entirely different direction. One wonders why this happened.

A great deal of the information on events leading up to the final decision may never be known; however, the published record does make it clear that there was some confusion over what transpired in 1924. In 1927 the A.A.U. committee issued a second report to the Board of Education. It was a long report, the following is a short excerpt. Anyone interested in this area should read the entire statement which follows as it is very informative.

In the opinion of your Committee, the difficulties which have resulted in the present variety of practice may be traced: first, to the misconception that a degree is given for a number of years' work rather than for a definite accomplishment; second, to the view that elementary subjects are proper material for a Master's degree.

The Committee recommends that the answer of the Association to the inquiry of the Secretary of the Board of Librarianship be essentially as follows:

1. The Association considers the conferring of a second Bachelor's degree after the first year as undesirable. The recommendations of the Association have been based on the assumption gained in conference with the Board of Education for Librarianship that a minimum of two years' preliminary and advanced library work, of which one year is essentially elementary and the other strictly advanced, is essential to maintain a standard equivalent to that observed in other subjects. It would seem, therefore, that the Master's degree should be given only on the basis of the last year's work.

The recognition for the first year should be a certificate partly because of the character of the work and partly because of the undesirability of giving a second Bachelor's degree. If the Board can establish the character of the first year to be equivalent to an undergraduate major in other subjects for the Bachelor's degree, based on proper prerequisites, then the certificate which stands for vocational work might be omitted altogether rather than confer

a second Bachelor's degree. If a two-year course for librarianship is essential to round out the student's training, it seems undesirable to encourage a stopping point after the first year. To give a Bachelor's degree to graduates after the first year of library work would be equivalent to giving graduate law students a Bachelor's degree after completing the first year of law work.

2. The diversity of practice in that some institutions give a Master's degree after one year and others after two years is legitimate because the institutions conferring the Bachelor's degree after one year require the previous completion of a major in library science in undergraduate standing. Similar practice prevails in other subjects.

3. The Association is not ready to reconsider its recommendation of two years for the Master's degree and to substitute one year for graduates without distinction on the basis of its present knowledge concerning library curricula, except as specified in the preceding paragraph.[4]

It does not seem possible that anyone could find a basis for modifying this set of A.A.U. recommendations. The case seems to be unequivocal.

a) It was undesirable to grant a second bachelor's degree.

b) It was undesirable to grant a certificate at the end of one year in a two-year program.

c) It was undesirable and not really possible to grant a one-year master's degree unless there was undergraduate training in the field.

d) In the eyes of the A.A.U. committee the first year's work in the librarian training programs was essentially elementary and not of graduate caliber.

An interesting sidelight is the fact that none of the Board of Education for Librarianship annual reports mention the second set of recommendations from the A.A.U. A review of the literature on library education for the years 1927, 1928, 1929, and 1930 also fails to provide any reference to the A.A.U. report of 1927. In 1928 the A.A.U. discussed degrees in library science for the last time. The tone of the report seems to be one of surrender, giving the Board of Education carte blanche because the board was unwilling or unable to accept the A.A.U. recommendations.[5]

This rather long discussion about a small historical event does have its place and relevance in a paper on training for academic librarianship. Academic librarians wish to be considered equal to teaching faculty. Two basic problems standing in the way are the training received and the type of work that is all too often performed by academic librarians. In the fifty plus years that have passed since the A.A.U. committee reviewed library education there have been a great many superficial changes in programs but there have been few

if any basic changes. Today we are as far from the A.A.U. position as we were the day the report was issued. While there may be a valid question as to whether an A.A.U. position on any degree program should be followed, the fact remains that most academic and professional fields do consider the A.A.U. recommendations very important. It is also true that librarianship is the only field offering a master's degree for one year of work without an undergraduate major in the field or an equivalent number of courses in specified areas. If we, library school teachers and deans, are really honest with ourselves and the profession, we have to admit our programs are essentially elementary and not at the graduate school level. How can it be anything but elementary when the majority of courses have to be taught as "Introductions to . . ."? Clearly such courses are necessary but alone they are not and cannot be considered as constituting a graduate level program no matter how hard we try to make them fill that role.

As long as we continue to offer the one-year master's degree no one will convince the majority of academic faculties that an M.L.S., M.A., or M.S. in L.S. is in any way equivalent to an M.A. in history or English or an M.S. in physics or chemistry. Most librarians would not believe it either. This problem combined with a public image of the librarian as an individual who performs basically clerical tasks produces a situation most difficult to change. As is so often the case there are a great many problems all interrelated, and any effort to correct one problem may magnify another. For example we tell our students to act in a professional manner and resist unprofessional duties, but we also know a good librarian is "not afraid to get his hands dirty." From the users' point of view, too many librarians are observed shelving books, straightening up tables, and checking out books. There are many valid reasons for this situation to arise, very often inadequate staff support from the library's funding agency. Perhaps one of the reasons for the lack of support is due to the inability of the librarian to deal with the power structure adequately and present solid evidence of the need and value of the services a library may provide. Part of the inability to do this type of work may be due to the type of training the librarian has received.

PRESENT SITUATION

When there is no clear understanding of what a "core curriculum" should contain it is not surprising to find little agreement as to what "special" training a library school should provide individuals going into academic libraries. In general we operate our programs as if different types of libraries did not exist. In order to provide a course equally applicable to the large research library, a medium-sized public library, or a small school library the course content must be

geared to some "average" situation, which seldom exists. Such courses in turn further promote the idea that training for librarianship is very elementary and not really worthy of graduate level status (unfortunately such courses represent a large segment of our curriculum).

A study that will be published in the near future[6] analyzed the catalog descriptions of all courses listed by forty-six accredited and twenty-nine non-accredited library schools. Several of the non-accredited schools included in the analysis have since received accreditation. The results of the matrix and factor analysis are very interesting and anyone interested in library curriculum development will find the report worth reading. No attempt will be made to summarize that study here; however, a few words about the method of analysis are in order. The analysis is based upon the description of each course as given in the school's catalog. The limitations placed upon the study by this approach were clearly recognized by the investigators. A curriculum classification system was developed and on the basis of the catalog description, every course listed was placed into one of fourteen major categories. Some major categories such as organization and administration of libraries were subdivided so the system contains forty-eight possible categories. We are concerned with courses listed as dealing with academic librarianship. The study shows twenty-one schools, eleven accredited and ten non-accredited schools, offer no course described as dealing with academic libraries; forty schools, twenty-four accredited and sixteen non-accredited list one course in the field; eleven institutions, nine accredited and two non-accredited schools have two courses listed as dealing with academic library problems; two accredited library schools offer three courses and one accredited school offers four courses. While a great many other courses offered could and do have application to an academic situation, none of the course descriptions indicate this is the primary purpose. From the course analysis there would appear to be only one library school (offering four courses in the field) that could claim to be making a real effort to train academic librarians.

At the risk of being too elementary, it would seem all professional library functions can be subsumed under six headings: 1) collection development (evaluation, selection, and supervision of the acquisition process, etc.); 2) collection organization (developing new systems, modifying existing systems of classification, cataloging, indexing and abstracting, supervision of general cataloging and classification processes, etc.); 3) collection interpretation (aiding in securing information, teaching courses in the field of bibliography and how to use the library, etc.); 4) controlling the overall operations of the library (recruitment, selection, training and supervising personnel and managing resources, etc.); 5) planning and developing new

programs and services (short- and long-range planning including a very thorough review of existing programs and services, etc.); and 6) conducting research into library operations and bibliographic control in order to improve performance (behavioral studies, operations research, historical studies and analyses, etc.). Three of the basic functions would appear to require training in fields outside library service.

While principles of management, resource planning, and research methods can be and are taught in the library school, this does not mean that this is the best place in which to offer the work. It would seem more appropriate to rely upon the expertise of the fields of business administration, political science, and other academic disciplines and expose the librarian to courses with a scope beyond librarianship. Often a management course taught in the library school by a person without a business major will contain only those elements of management which the individual feels are related to library work. The same type of course in a business school would have a much broader scope and would expose the librarian to a wider range of ideas and techniques.

When one examines the changes occurring in higher education and academic librarianship in terms of skills and knowledge needed for academic librarianship, one concludes almost 50 percent of the course work should be in fields other than library service. (Another conclusion is: if we attempt to handle all areas of skills development and knowledge listed at one time or another as essential, we would never graduate anyone ready for the academic field. They would be ready for retirement first.) The academic institution is currently undergoing a major period of change. However, as anyone who has read a history of American higher education knows, the present situation is not unlike several other earlier periods of development and change. The history of higher education also makes it clear that those segments of the institution that do not change are dropped. It is clear, therefore, that the academic library must be aware of and responsive to these changes. Library staff members must not only be able to respond to change, they must be capable of aiding in planning and directing change.

From an institutional point of view there are several major changes occurring which influence the library. Higher education has been opened up to a great many people who in the past would not have been admitted because of inadequate academic background. This expansion of the college's or university's educational function, e.g., giving such individuals the necessary background to enter the regular academic program, means the library must be prepared to back up the program with materials and staff members who can work with non-academicians. Another change is the long overdue realization that in America cultures exist that are as different in their value

systems, mores, and life style as any foreign country. With this has come the realization that individuals from such groups cannot and will not react in the "normal" manner to the standard value system and methods of operation of higher education. As a result there is a need for people on the academic staff, including the library, who are able to understand both value systems and are able to work effectively with different groups. This situation will require that public service personnel be much more sensitive to people and their needs and will perhaps require individuals to take some special training for work in this area.

The curricula of the academic institutions are under fire (as has always been the case), and there are pressures to make changes. The problem seems to be what and how to change the programs. One group wants more practical courses, while others want more relevant theoretical work; about the only element on which there is agreement is that whatever is offered must not be given in such a way as to ignore the real world beyond the campus. Many new courses are being added in areas never before discussed at the academic level, some may not remain in the curriculum for long, but while they are offered there must be library support. Frequently, not only is the content new, but both the method of presentation and content require the use of a number of information media not often employed in academic library work. When this happens the library staffs are forced into areas in which they are not prepared to work, and by the time they have gained enough background the program has ceased to exist, in part from lack of support.

Every year seems to bring with it an increase in emphasis on the paper credentials of the academic staff. It now is very difficult for a teaching staff member to gain tenure if he does not have a doctorate. In their efforts to gain academic status the library staff becomes involved in the degree chase. It is becoming more and more common for colleges and universities to require the director of libraries to have a doctorate. Degree requirements for library staff are also being raised, especially if they are given security of employment.

What does all this mean to librarians on the job? Perhaps the most significant point has been in terms of the increased emphasis on paper credentials in the academic institution. This in turn relates to the desire for academic status and to the need for acquiring new skills and additional academic degrees to keep pace with institutional demands. Very often it seems that a second master's degree (usually a subject degree) is required or expected not because it is relevant to the job to be performed but because the second degree is more "respectable" academically than is the library degree. Could it be that part of this problem goes back to the A.A.U. recommendations of 1927? It is conceivable that if we had changed or would change our

present programs to conform to those recommendations, some of our present problems would disappear.

With the tremendous growth of academic libraries, librarians have had to develop new professional skills and/or specialize in only one phase of library work. For example, in many large systems there are no government document librarians but rather specialists in either state and local, U.S., U.N., or foreign government documents. Specialization of this type can be found in most of the other major units of a large academic library. Librarians wishing to work on collection development are faced with an emphasis on having a subject background, preferably a subject master's degree. As the size of the library collection grows and as the universe of potentially useful information expands it becomes necessary for some librarians, those in public service work, to become teachers in every sense of the word. They must not only teach individuals how to use a particular library in an effective manner but also the general use of bibliographical tools. In some cases, especially in major fields of academic study, librarians may teach the bibliographic unit in an introductory research methods course offered to students majoring in the field. The teaching function is being further expanded by the need to assist students in new programs designed to bring students with high academic potential but with a poor educational background up to the point where they can handle college level work.

Special training providing new managerial skills is also needed as a result of the growth of the academic library. When a library staff is made up of a large number of people it becomes almost imperative to have one person assigned to handle personnel matters. If the individual with such an assignment is to perform the duties properly he ought to have some training in the field. Very few librarians have had training in this area. At all levels of professional duties there is a great need for knowledge of the principles and concepts of management, supervision, budgeting and planning going far beyond the content of most current library administration courses. Many librarians find in their first year on their first job they must plan, direct, and review the work of nonprofessional personnel, especially in the medium-sized and large academic libraries. In a one-year library curriculum there is not enough time to add too many outside courses without losing some of the professional content. It has reached the point in the case of computer technology and systems analysis where many library schools now offer another degree program geared to just this phase of library work. To be able to plan new programs, to evaluate current operations, and to explore new ways of handling library problems, academic librarians ought to be exposed to the techniques of research. Most of the above subjects are touched upon in the library school curriculum, but in one year the coverage must

be very superficial if the professional content is to be given at the same time.

Librarians in academic libraries must also begin to consider the matter of the evaluation of their job performance. The usual collegial organizational pattern, in which there is peer evaluation, has implications for library organization, since meaningful peer evaluation and professionalism are difficult to achieve in a highly structured bureaucratic institution. If the system of evaluation is patterned after the academic system, and it probably would be, the librarians must be free to engage, and be trained to engage, in a number of activities that have not been considered traditional librarian activities, viz., writing, classroom teaching and conducting research projects. This is in addition to their regular library duties. Clearly in order to participate actively in such a program the librarians would need to acquire some of the additional skills noted above. Again the one-year program does not provide enough time to cover all the necessary topics and skills required for academic librarianship.

FUTURE DIRECTION OF EDUCATION FOR ACADEMIC LIBRARIANSHIP

In the preceding section most of the generally agreed upon needs of academic librarianship have been mentioned. At the most elementary level the situation would seem to consist of three parts: a) a need for more depth in the professional courses, b) a need for more coverage of topics outside library science, and c) a need for more time to train librarians, while resisting the pressure to train a great many more people more quickly. The demand for more people may be starting to taper off although some groups are still talking about doubling the number of trained librarians within the next ten years.

The remainder of the paper will focus on the UCLA Library School program—what it is, what we think it can do, and how we hope to implement the program. In the following decision please bear in mind that we (the faculty of the UCLA Library School) are in no way suggesting that what we plan to do is the ideal approach. The discussion focuses on the new UCLA program because a) we feel that while it may not be ideal it does create some basic changes in the curriculum of American library schools, b) the changes are of the type and in the direction needed, and c) having worked on the program for several years the staff understands what is involved. At the present time and until such time as the program and its graduates prove themselves, it is unlikely that any field except academic librarianship will compensate the new graduates for their additional training. Nevertheless, we feel that changes of the type we are going to undertake are essential for training all types of librarians, if the field is to meet the challenge of providing all levels of society with

all the information and knowledge needed to achieve a balanced, healthy, harmonious state. The basic elements in our program are a) more time for training, b) more outside course work, and c) an opportunity to develop some professional background before graduating and taking the first job.

Our basic decision has been to drop the one-year M.L.S. as our primary degree and to offer a two-year M.S. instead. This is a rather fundamental change and would bring the program into line with other academic and professional degree programs, just as the A.A.U. committee recommended forty-six years ago. It would also be in agreement with the proposals made by several Canadian library schools to grant only two-year master's degrees. The reasons for two-year programs have been discussed a number of times and our rationale has been developed from the factors usually mentioned: a) to provide more and better training, b) to bring the program into line with other fields, c) to improve the image of librarianship by training people for a profession rather than a job, and d) to train a group of individuals whose duties and abilities are clearly distinct from those of other library staff members (especially important with the development of library technician programs). While there has previously been some discussion of making such a change among American library schools, none has made the attempt. The University of California, Berkeley, for a long time resisted the one-year master's degree program* and no doubt other schools have had some programs that require more than one year to complete.

Four primary areas of practical problems stand in the way of changing to a two-year program: a) maintaining a reasonable enrollment in the school, b) maintaining adequate financial support, c) determining what the content of the program should be, and d) establishing the necessary working relationships with other academic departments in terms of outside course work. There are many subproblems in each of the primary problem areas, and each one is important to the success or failure of the program. A number of people wonder whether a two-year program can and will attract students. Why should anyone spend two years getting an M.S. or M.A. when he can go to another school and receive an M.L.S. in one year? In addition there is little likelihood that the two-year graduate will be compensated for his extra training, at least at the beginning of the program. We hope this will not be a critical problem although our enrollment will undoubtedly drop below its present level, even after two or three years of operating the new program. If the rationale for

*It was not until 1955 that Berkeley replaced the B.L.S. with an M.L.S. and from 1928 to 1960 there was an M.A. program that required two years to complete.

such a program is sound, however, it should in time attract students. With the aid of fellowships, scholarships, and internships, we hope to reduce, if not eliminate, the extra financial burden which the second year would place on the student. After a few years, if the program is successful, the graduates would probably begin to receive some additional compensation, and be considered first for new positions and promotions to more responsible positions.

A loss of enrollment in most library schools would mean a loss of institutional support, since funding is often based upon some form of student full-time equivalent (F.T.E.). With outside sources of financial support becoming less reliable, and with no one knowing when or if they will become readily available again, the importance of maintaining a large F.T.E. is apparent. Even when institutional staff members are willing to encourage making changes of this type there are problems of being able to support the program long enough for it to prove itself. Higher education, as we all know, is under fire from all sides and the general public does not approve of a great deal of money being spent on "experimental" programs. At best library schools can only hope for modest increases in support, and realize that changes reducing enrollment may jeopardize the entire program because of lowered financial support.

The problems relating to what should be in a two-year program are the same as those discussed in library literature for years. What should be required, what are the core courses, how much practical work should be included, what outside courses should be required, if any, etc.? Who should be involved in the decision-making process— staff, students, alumni, employers, everyone? These are the types of questions always asked and many of them must be answered before the program can be formulated. However, some of the thinking about these matters has followed traditional lines and as a result has not produced any new approaches to the problems. If there can be a meaningful involvement of a great many people in the entire process the results, while perhaps not ideal, do represent known needs.

There are some very real coordination problems in using courses outside the library school as fundamental to the library school program. It is almost impossible to require for graduation the completion of a specific course offered outside the library school. First of all, there can be no guarantee that the course will be given every year or at the time the library school students need the course. Second, most departments feel they have a heavy enough load without taking on one or two hundred additional students. Third, there is the problem of relating the course work to librarianship and this may create problems for students who have had no library work experience. The coordination problem usually means requirements for knowledge and skills from other disciplines ought to be prerequisites either for admission or for a specific course in the library school.

In the case of a prerequisite for a library school course, it is seldom possible to require that course for all the students in the program.

With the above in mind, what is it that the UCLA Library School proposes to do? We think the combination of elements is unique, and we have decided to make one fundamental break with tradition. The basic program will be a two-year sequence with *no* specific course requirements but with specific areas of competence required, and with a provision in the program for some practical work experience. At a special departmental conference which included students, faculty, staff, and library administrators, the school decided to discontinue our primary degree (the one-year M.L.S.) beginning in the academic year 1971/72 and substitute a two-year M.S. program. We have since been forced to modify this slightly to allow the continuation of the M.L.S., but people will be actively discouraged from enrolling in the program insofar as possible.

What we mean by a two-year program is that normally a student will require about six quarters (two academic years) to earn the Master of Science degree. It cannot take much more time because the University of California places an upper limit of seven quarters for completion of the master's degree. Certainly if the student does not feel he can do the work in that time he is not ready to be admitted to the program. As will be noted later it would be possible for a student to complete the program in one year under certain circumstances. The anticipated sequence would be for the student to begin in the fall, to engage in three quarters of basically professional academic work and during the summer to participate in an internship or to undertake an independent study project. The second year would be spent taking additional courses, engaging in a research project or writing a thesis and preparing for the comprehensive examination.

If any element in our new program is in any way original or different, it is the decision no longer to require a set number of courses to be taken within the school by all the students in the M.S. program. To be sure, there will be a required number of courses, and the student must spend some time in residence and gain some or all of his training in organized formal classwork. If there were no need for this, then there would be no justification for the school to continue to exist as part of the university, at least in terms of the present organizational pattern and purpose. Therefore, we will require, in accordance with the University of California regulations, that students complete nine courses within the university upper division or graduate level offerings.

Instead of required courses we will require a demonstration of competence within certain fields. The program is intended to reflect both a professional and an academic competence and should provide the academic librarian with a better background than he presently receives. Competence may be acquired in a number of ways: through

previous study or experience, through course work in the school, through course work in other departments, through internships, through work experience concurrent with formal study, or through directed individual study. Formal credentials will be used to determine competence (degrees, official transcripts of academic work, a thesis, publications, scores on tests and examinations, etc.). We feel this decision is a departure from the rigidity and formalism so characteristic of many programs; and it provides for a flexible program and individualized preparation for professional practice, teaching, and research in the field of librarianship, bibliography, and information science. Perhaps it will help to do away with the "trading stamp mentality" that has affected to some degree all parts of higher education. It should also foster a much greater sense of professionalism where the emphasis will be upon individual effort and tested abilities rather than simple survival in a set number of courses and examinations. When the work is so arranged that the individual, with guidance and aid, is responsible for achieving his own goals, then the effort expended and the results are much more meaningful. To some extent we would expect that the type of person who will elect to undertake such a program will be more convinced about making a career in the field and would rise quickly regardless of the type of training he received.

The following are the requirements of the new program.

A. *Admission Requirements*

1. Admission to graduate status. The requirements are quoted from the UCLA *General Catalog*:

Requirements for admission to the Graduate Division include a bachelor's degree, or the equivalent, from an institution of recognized standing. The applicant's academic preparation should be equivalent to that required for a comparable degree at the University of California. A minimum average of B, or its equivalent, is required for the last two years of undergraduate study and for any postbaccalaureate study. Honors, awards, and experience related to the proposed field of study are important credentials. Individual departments may specify additional requirements and standards for admission, however, including such special examinations as the Graduate Record Examination or the Miller Analogies Test.[7]

2. A satisfactory score in the General Aptitude Test (verbal and quantitative) of the Graduate Record Examination. A satisfactory score is 1200. Applicants who meet all other admission requirements, but who have a GRE score below 1200, will be admitted only with the condition that they must achieve a 3.0 grade point average in the first quarter of course work in order to remain in the school.

3. Two years of modern foreign language study at the college level, or equivalent reading in one or two modern foreign languages.

Testing may be required if deemed necessary by the school's admissions officer. Less than a year of study of a language at the college level is not regarded as evidence of minimum reading skill.

4. Evidence that the applicant has the potential of becoming an excellent practitioner, teacher, or scholar in the fields of librarianship, bibliography, or information science. The admissions officer, with the advice of a committee when necessary, will evaluate this potential on the evidence of:

a) Information furnished by the applicant in a special application for admission to the school (including a "statement of interest").

b) Report of an interview by the Dean of the School or by a person designated by the Dean to conduct the interview.

c) Three letters of recommendation.

5. The admission of entering students is limited by the quota of students allocated to the School, and the available laboratory space, research facilities, and instructional staff. Selection for admission may, therefore, be on a competitive basis. Such factors as recency of formal education, working experience, and assured placement following award of the degree may be considered in addition to the qualifications listed in 1-4 above.

6. If the admissions officer and his advisory committee believe that the applicant has an inadequate understanding of the purposes and requirements of modern library service, bibliography and information science they may recommend postponement of admission until the applicant has obtained working experience with a satisfactory performance rating in a suitable library or information agency.

7. Because the enrollment in the School is limited the admissions officer will give preference to applicants that wish to pursue the Master of Science degree program. Individuals wishing to enroll in the M.L.S. program are advised they will be admitted after all qualified applicants for the M.S. program have been admitted.

B. *Degree Requirements*

1. Evidence of competence in the specified fields which are listed in section D below. The level of competence in each field will be indicated in each student's summary record. Competence may be acquired in a variety of ways, and may in part be acquired before admission to the School.

2. Evidence of a specialization in library science, bibliography or information science. The specialization may be developed almost entirely within the programs and courses offered by the School; but it may also be based upon study in a cognate academic discipline (i.e., the disciplines which are the bases of the various departments in the UCLA Colleges) or professional area (i.e., the fields which are the bases of the various departments of the University of California schools). When the specialization is based upon study in a cognate

field, its relevance (to library science, bibliography, or information science) must be evident in the student's research paper or thesis.

The basis of specialization, whether direct or cognate, may be acquired before or after admission to the School. Evidence of a satisfactory preparation for specialization will normally be an academic year of study beyond the bachelor's degree, or experience equivalent to a year of graduate study. The School may, if it deems necessary, require formal testing to prove that the experience is actually equivalent in knowledge base to that acquired in an academic year of graduate study.

3. A research paper or thesis. The subject of the research paper or thesis must lie in the student's field of specialization; and it must reflect understanding of the theories, principles, and methodology of research. Furthermore, the research paper or thesis must be of sufficient importance and substance to justify dissemination through publication or deposit in an information clearinghouse which will furnish copies upon request.

4. Other degree requirements

a) Residence. Minimum of three quarters, full-time. Maximum of the equivalent of seven full-time quarters.

b) Courses. Minimum of nine courses with grade A, B, or C. The nine courses must be in the 100, 200, 400, or 500 series. For the M.L.S. degree, five of the nine courses must be in the 200, 400, or 500 series. For the M.S. degree, five of the nine courses must be in the 200 and 500 series and all five may not be in the 500 series.

c) Scholarship standing. Grade point average of at least 3.0 in all courses undertaken in the University of California after the bachelor's degree.

d) Formal filing of the accepted thesis for the M.S. degree.

e) Completion of a summary record of competence, a curriculum vita, and a summary evaluation of performance as a student in the School. These records are compiled by the student and his faculty advisor for deposit in the student's permanent record file.

f) Completion of a petition for advancement to candidacy.

C. *Fields of Specialization*

The School will not claim that it can, in two years, train persons to accept initial appointments which require the highest level of professional leadership, or full mastery of a specialized professional or academic field. On the other hand, our master's degrees and certificates should certify special competence in at least one area of librarianship, bibliography, or information science. The examples given below are not intended to be exhaustive but merely suggestive of subspecialization.

1. *In librarianship*

a) History of librarianship

b) Foreign, comparative, and international librarianship

c) Librarians (and other professional specialists) in society

d) Libraries (and other information agencies) in society

e) Development, maintenance, and evaluation of collections and services

f) Government, administration, and management of libraries and information agencies.

2. *In bibliography*

a) Identification and description of documents

b) Systematic bibliography (organization, structure, maintenance and control of bibliographical records—bibliographies, catalogs, lists, indexes, calendars, inventories, etc.)

c) Subject bibliography (bibliographical control and evaluation of sources of information in: 1) the arts and humanities, 2) the social and behavioral sciences, 3) the life and health sciences, 4) the physical sciences and technologies)

d) Historical and analytical bibliography

3. *In information science*

a) Systems analysis and design

b) Information identification, storage, and retrieval

c) Communication of information; information transfer

d) Information systems. Includes file organization, search strategy, file control, reporting, and social implications.

D. *Fields of Competence for Master's Degrees*

1. Knowledge of foreign language, mathematics, and computer programming. A reading knowledge of one or two modern foreign languages (preferably French, German, Spanish, Russian) is required for both the M.L.S. and M.S. degrees. A knowledge of mathematics through the calculus level is also required for the M.S. degree. Additional or specific foreign language knowledge may be required to complete a field of specialization. Normally the minimum requirement in foreign language and mathematics must be completed before admission to the School. Understanding of computer programming is required for both the M.L.S. and M.S. degrees, but deeper knowledge of programming languages may be necessary for specializations within the M.S. degree program.

2. Knowledge of the theories, principles, and practices of the evaluation and selection of informational materials.

3. Knowledge of the theories, principles, and practices of identification, description, and control of information materials.

4. Knowledge of the theories, principles, and practices of the dissemination of information and informational materials.

5. Knowledge of the philosophy and major problems of librarianship; of the roles of librarians, bibliographers, and information scientists in society; and of the social value and relevance of libraries, information, and information materials.

6. Knowledge of the theories, principles, and practices of organizational-institutional control, functions, management, and behavior. Since professional activity is performed nearly always in organizations, institutions or agencies, an understanding of the government, administration, management, and behavior of organizations is necessary for librarians, bibliographers, and information scientists.

7. Understanding of the nature and importance of skills which are essential for performance at a professional level by librarians, bibliographers, and information scientists.

a) Theories, principles, and methodology of research. It is a requirement of performance at the professional level to be able to identify problems, to investigate them, to propose solutions, to test the solutions, and to communicate findings.

b) Theories, principles, and methodologies of teaching, supervision, and performance evaluation. It is a requirement of performance at the professional level to be able to teach others (e.g., to use libraries, to locate and evaluate information, etc.) and to supervise the work of and evaluate the performance of assistants.

c) Applicability of systems analysis and design, quantification (measurement, cost analysis), and mechanization or automation in the solution of problems of management, communication, and information retrieval.

Each student in the M.S. program will be expected to specialize during his second year in the school. As can be seen, the areas of specialization are very broad and the subspecialties are sufficiently broad that a student need not feel he is necessarily cutting himself off from other areas as a result of electing a specialty. What the specialization will mean is that a student will be able to pursue an area of interest in some depth, perhaps acquire working experience in the area, and engage in some research relating to the area. In this way the student will have a much better idea, before he leaves the school, of whether he will like the area and can choose his job on the basis of a real knowledge of what is involved.

No doubt the most difficult aspect of the change was and is the problem of defining what we mean by competence and how it is to be measured or determined. We do not claim to have a completely satisfactory answer at present, and it is probable that we will modify our definitions several times as the program begins operation. The operating definition of a competent individual is one who has the following qualifications: 1) an understanding of the theory and principles underlying a defined area of knowledge, technology or practice; 2) a familiarity with the literature of a defined field; and 3) a demonstrated ability in using the techniques, tools, and methods for effective performance in a defined activity or operation. There are these

five methods of obtaining competence, and the evidence which is required in each case:

1. *Formal, organized course work or program of study*

This type of competence should guarantee at least a minimal professional competence (i.e., performance evaluated by continual interaction over a ten-week period or longer between the instructor and students).

Evidence: transcripts, course grades, scores on examinations, written records of evaluation, and papers written to fulfill course requirements.

2. *Independent study*

This method of obtaining competence should guarantee an independent professional level of competence (i.e., the ability to define a suitably complex task for oneself and to carry out the required work).

Evidence: written examinations, publications, reports or thesis.

3. *Directed individual study*

This method of obtaining competence should guarantee a minimal level of independent professional competence (i.e., the ability to define a suitably complex task with the aid and direction of a professional librarian and to carry out the necessary work with minimal outside help).

Evidence: examination (written or oral) and/or evaluation by the person who directed the study.

4. *Working experience*

This method of obtaining competence should guarantee at least a minimal level of technical competence within a specified area (i.e., the ability to perform a specified set of exercises or routines in a defined area such as cataloging materials following an existing form).

Evidence: written evaluation of the nature of the work and the performance of the individual doing the work. Self-evaluation is acceptable evidence when supported by a written or oral examination.

5. *Internship*

This method of obtaining competence should guarantee at least a minimal operational competence at the professional level (i.e., the ability to perform beginning professional duties in a real work situation, but under the close supervision of a professional librarian and a school representative).

Evidence: a written evaluation of the work program and a self-evaluation of performance prepared by the intern, and a written evaluation of the intern's performance by the two supervisors.

The internship program will provide a great many challenges and problems for the school. While there was considerable support for making the internship a requirement for advancement to candidacy, the final decision was to leave the matter open in order to maintain as much flexibility as possible in the program. By leaving the matter

open a student and his advisor will be able to use or not to use the internship as a means of acquiring competence, depending upon the student's individual needs and desires. Many students and employers feel very strongly that the internship is a necessary and highly desirable element in the new program while almost an equal number feel it will not be worth the effort. Realistically, a required internship program would be almost impossible to make compulsory at the start. There are and will be complicated problems in organizing the program, in developing methods of supervising and evaluating the program and students, and in financing the program. It will be essential to have some internships available for the two-year students in order to help alleviate the financial burden of the extended program. A number of work-study programs could be more easily developed but there would be more problems in making these programs a means for acquiring competence, especially professional competence, and for developing ideas for research projects. There could also be some problems in evaluation since the school would probably not have a part in the evaluation process.

Practical considerations for implementation of the new program have caused us to make some minor variations in our program. The first consideration was to continue to offer the M.L.S. (a one-year degree) during the first few years of operation of the new program. What we plan to do is to actively discourage students from electing the M.L.S. program. The M.L.S. will be an option for the students *and* the school. Students may elect to take only the one-year degree but the school will also have the option of giving the M.L.S. (after the first year) to students in the M.S. program who do not have the potential to complete the two-year program. The M.L.S. will be a terminal degree. This practice should clearly show we do *not* consider the M.L.S. as adequate preparation for librarianship. Students who have a subject master's degree prior to entering our program will be able to earn the M.S. in one year provided the academic competencies have already been adequately covered.

Additional steps are planned to discourage too many students from electing the M.L.S. program. As indicated in the section on admission requirements, students electing the M.S. program will be given preference in admission, and in view of our limited enrollment policy this could be important. Financial support (fellowships and scholarships), internships, and work-study opportunities will first be offered to the M.S. students and then to the M.L.S. students. At the time of graduation more time and effort will be devoted to placing the M.S. students in the best possible positions than to placing the M.L.S. students. Finally, we have even considered asking the accreditation committee of ALA to accredit *only* the M.S. program.

The program we are talking about is geared to training the type of librarian Asheim had in mind when he described the professional

specialist.[8] No doubt some will feel it will overtrain too many people, or that it will be too "elite" in tone for the students' own good when they get into the real world. To some extent this may be true; however, we feel there will be more of the real world and more relevant work in our program than is now the case in a great many library school programs. This type of program will be most beneficial to academic librarians especially at the beginning of the program. However, the same degree of training and professional-academic competence is needed in all areas of librarianship. We feel programs of this type (two years, practical and theoretical, academic and professional) are needed to provide the country with librarians who are capable and willing to plan, direct, and control the development and changes needed to make library-information centers an essential part of society and available to everyone at a meaningful level.

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CURRICULUM FOR THE
PREPARATION OF PUBLIC LIBRARARIANS

THE TALENTS AND SKILLS NEEDED
FOR PUBLIC LIBRARIANSHIP

Since the Leigh study of the late 1940s, a full, direct look has not been given public librarianship, and the analyses of the requirements for professional education for this aspect of the field have been sparse in any period. Because public librarianship is the many faceted thing it is, to put the curriculum for such education into a single prescription has usually forced a limited perspective. Further, to discuss the education of public librarians separately from the education of librarians for other types of libraries is to create an unnatural distinction in the exploration of universal problems. This paper, nevertheless, attempts to elucidate a single framework for professional education of public librarians, and focuses on some of the special problems of this aspect of the field which may be said to distinguish it from preparation for other types of libraries.

To design a curriculum, we must envision its purpose. I reject at the outset the notion that the curriculum for the M.L.S. is designed to prepare the student *solely* for his first job, but conceive that it must prepare him for a career of library service in the context of continuing professional education. To do this, the curriculum must anticipate the important developments in the professional field and provide a base broad enough to enable the new librarian to understand the changes, to direct the solutions to problems, and to capitalize on the opportunities offered by change. A broad, general education in the social sciences and humanities seems essential for a public librarian's understanding of the sources of social change, but I shall not explore this further. However, I shall assume that a major task of the curriculum for the public librarian is the development of skills in policy formation, problem solving, and service adaptation in the light of library objectives.

Unlike librarians of other types of libraries, the public librarian works within an autonomous library—the library for the total community. He has, therefore, a unique responsibility in direction-finding

and goal-setting with a freer play to his own insight and enterprise than may be possible in any other type of library. He must have the skills of interpreting his program, since public libraries are fully accountable to the public (the trustees, the governmental units from which they derive their support, and public opinion in general). The skills of consultation and planning, therefore, are of major importance to every public librarian.

Anna Hall's recent attempt to identify curriculum requirements through an analysis of public service tasks in public libraries is the first step toward a more precise approach to curriculum construction.[1] Earlier and rougher analyses, such as that of the Allerton Park Conference in 1954, developed broad outlines of curriculum required for adult services librarians. Comparably broad analyses for children's services, information services, technical services, and administration are not available. The art of deriving curriculum from analysis of present practice, however, lies obviously in the curriculum-maker's insight and evaluative penetration into the inadequacies of the present practice! No curriculum can be developed until there is an answer to the fundamental question: Shall the library school curriculum lead or follow? Philosophically the answer inevitably is "Lead." The few analyses of present curricula vis à vis practice seem to suggest that truly following the *best practice* might be step number one.

Let me turn to a few specific changes in public librarianship which require a reassessment of public library curriculum in library education. First, changes in personnel structure in public libraries in the last fifteen years have come from three influences: 1) the development of systems, 2) the differentiation of nonprofessional roles for library technical assistants and library associates, and 3) the addition of professional staff from related professional areas (journalism, business, social work).

Public library systems have provided for the first time, in a general way, career positions outside the strictly administrative role. Specialists, consultants, and coordinators of library collections, technical services and varied aspects of reader services have positions of sufficient stature to make them career goals, and of sufficient complexity to require specialized professional education. Such educational specialization inevitably comes after some library experience and direction-finding.

Two recent studies show that the great majority of librarians are engaged in some aspect of library administration. Elizabeth Stone, in *Factors Related to the Professional Development of Librarians,* found 67.4 percent of librarians in administrative roles within five years of graduation from library school.[2] In the 1968 "Survey of Public Library Personnel Serving the Inner-City," I discovered that 43 percent of the personnel working in public library inner-city service

supervised other staff, 22 percent of the total supervising six or more persons. Only 46 percent of the total group were classified by their libraries as professional personnel.[3] Lowell Martin, in advising on the development of the Chicago Public Library, urged a redistribution of personnel levels to double the top administrative staff to 16 percent of the total professional staff and to lower the proportion in grades 1 and 2 from 79 percent to 59 percent.[4] This change in public library tasks, underway for some time in municipal systems, is accelerating with the advent of systems development as the general pattern for public librarianship.

The development of new nonprofessional levels in the public library personnel structure is one of the most promising events in the evolution of professional librarianship. The depression of the 1930s brought clerical positions firmly into the public library structure through the WPA; the technological revolution of our own times brings us the library technical assistant and the library associate, as defined by Lester Asheim in "Education and Manpower for Librarianship."[5] Just as in the 1930s, so now in the 1970s the professional librarian is further freed from routine professional tasks and he may concentrate on the complex and important work of the library which requires perspective, judgment and professional education. The more widely and consistently these nonprofessional positions are developed, the more creatively and successfully library education can adapt its admissions policies and its curriculum to the "new breed" of librarians. It is to this new breed that my opening remarks were related: the policy-maker, the assistant in the solution of social problems, the autonomous librarian. There are already many librarians in this new category; they should become the dominant pattern in public librarianship.

The third new element in the personnel structure of public libraries is the addition of staff from other professional fields. The public relations specialist, the devisor of social strategies for penetrating new fields of library service, the artist, the mass communicator—all bring specialized understandings and skills to difficult library tasks. The past history of such importation of talent might show that the greatest success in these areas comes as persons with these special skills also gain a mastery of librarianship's goals and methods. The librarian learns from them and they from him. Library education must prepare the librarian with a basic understanding of these related fields and with the talents for learning (with ease and satisfaction) from these colleagues in a happy, cooperative style.

Turning from changes in the personnel structure to changes in the task structure of librarianship, there is a fundamental change quietly in process, and that is the restructuring of reader services around *the special publics to be served*. The concept of "special public" is

not new; it was the heart of John Cotton Dana's institution of the Business Library in Newark, New Jersey, some seventy years ago. What is new is the recognition that the "general reader" (backbone of the public library these many years) is no more, and—even more affirmatively—he never existed! The public library is beginning to conceive its role not as serving the undifferentiated "all," but as serving the highly differentiated "many." Ralph Munn, as recently as 1949, identified service to particular groups of people as "fringe activities,"[6] but Lowell Martin in 1969 advised the Chicago Public Library, and the profession in general, to retain its multipurpose, multidimensional philosophy, but to add "literally scores of special-ties to carry and intensify service to the identifiable groups and segments within the population." Martin sees the public library as becoming "a congery of special libraries adapted to the distinct groups and interests that characterize the diverse population."[7]

Similarly in *Libraries at Large,* Knight and Nourse organized the working papers of the National Advisory Commission on Libraries around the needs of special groups of users: the nonspecialist, the prespecialist, and the specialist.[8] And public libraries serve all levels. Knight and Nourse identified recent changes in public libraries involving greater user-orientation of services and a staff that is more people-oriented. As school, college, and technical libraries expand and perfect their services, the public library is being seriously challenged as a viable institution; the public library's most appro-priate answer is its own expansion and perfection of service through attention to the particular needs of its special publics. Preparation of staff to serve at this new level requires reorientation of the cur-riculum for public librarianship to "special publics" as well as "community study," and "adaptation of services" as well as mastery of the fundamental service patterns.

There are two important technologies related to the service to special publics: the information services system and its technology, and the new community role of the librarian and the technology of collaborative planning and action. Library education must prepare librarians for these new roles with the appropriate technologies. Fortunately such technologies are not unique to public librarianship and can be presented to *all* library school students with the assurance of their fundamental importance. Their applications to public librar-ianship are distinctive and must be elaborated. A major concern of library education curriculum lies at the root of such course con-struction: the presentation of general principles with application in a variety of contexts. The diversity of public library applications alone requires methodological skill of this sort even in a course in public librarianship; the great value of seeing these technologies as uni-versal in librarianship broadly, encourages such presentation as

Ralph Blasingame makes at Rutgers in the course "Planning Library Services."

Information services and its technology are areas in which curriculum attention must be placed on the technology in depth for those who specialize in them; all public librarians need a detailed orientation as users and participants in the system. Bringing information science to bear on public librarianship in a meaningful way will also require that all courses in information service and all courses in public librarianship must reflect knowledgeability in this area and interpret the special technologies most relevant to their phases of service or administrative concern. A serious problem in curriculum development lies in the fact that often one course "unteaches" another course, as it displays ignorance of the essence of the new concept or technology. Such ignorance or denial of the importance of emerging values or emerging practices has a profoundly negative effect on the student. Consideration of new factors from all points of view is highly desirable, but the bland assumptions of ignorance are defeating. The total faculty, therefore, is essential to the design of a curriculum for the preparation of public librarians.

I would like to make one final comment on the new community role of the public librarian. The public librarian, whether with an administrative or reader service specialty, has become a "participant librarian" in the community. What a few librarians surmised from the beginning of the century is now a stark reality: the public librarian must plan his service cooperatively with his professional colleagues, with the governmental and political structure, and with his special publics, if the service he produces is to be adequate to gain continued public support for public libraries. Public libraries have got to *produce*; a major factor in productivity is realistic planning for and with the people to be served. Library education must prepare staff members capable of working with their counterparts in other professions, with representative groups of users, and with officials who need to understand library objectives and methods.

Beyond the "participant librarian" role, for many public library tasks the role of the librarian as the agent of social change is now a reality. A 1968 conference at Berkeley faced the question "Should the professional be an agent of change?" in the context of service overseas, and recognized the problems of imposing change as against the delicate techniques of assisting change. Some recognized the fact that "wittingly or unwittingly, professionals were agents of change in low-income societies"[9] if only because they brought with them assumptions and values different from those in the local culture. Many public librarians, spurred by an intensive experience in inner-city service, recognize that educational and information services mean change, and they accept the responsibility for this through cooperative planning with the users, with their colleagues in related

professions, and with the governmental structure. Lawrence A. Allen as library educator envisioned the implications of this role for the education of the adult services librarian in 1968, with a curriculum rooted in behavioral sciences, librarianship, management and public administration theory, and sensitivity training.[10]

One clear implication from the assumption of collaborative planning in the community is the importance of preparing librarians who understand the library's role as distinct from the role of other agencies. In 1967, a conference of the New York State Mental Health Department on Interdisciplinary Community Approaches emphasized: "It is imperative that a person know his nuclear identity as a member of his discipline in order to be free to move out of his role"[11] as the needs of the general task require. Basic grounding in library philosophy and analysis of the role of the public librarian in meeting community needs thus become increasingly important in education for public librarianship. Let me note in passing that school, college, and special librarians have a similar need as they move to new levels of effectiveness through collaborative planning.

THE CURRENT EDUCATIONAL PATTERN
FOR PUBLIC LIBRARIANSHIP

With this somewhat lengthy review of the changes in public librarianship which affect the curriculum, as preface, the question of where we are in library education stretches bleakly ahead. Let me start with a comment on some of the strengths.

In 1970, of the fifty-two accredited library schools, over a score have on their faculties public librarians with administrative or reader services' experience. Ten years ago there were fewer than half that number, and this group will grow. Although new schools applying for accreditation typically have their most serious gaps in this area, they are seeking to fill such faculty positions. The doctoral programs now actively engaged in preparing faculty are adding them from this field. Further, the professionalization on campuses of such fields as management, sociology and public administration, and the well-established schools of education, combine to support the needed education of public librarians.

The financial support of education for public librarianship through fellowships under the Library Services and Construction Act and through the HEA institutes program, together with the development of attractive placement opportunities in public library systems, has begun to raise the status of public librarianship in the eyes of library school faculties. This important step has been essential both to the recruitment of students to this area and to the reduction of "unteaching" in courses outside the strictly public library curriculum.

Presently there are two basic patterns of curriculum development

in public librarianship: 1) the reliance upon a cluster of traditionally titled broad-area courses that allow a specialization in children's and young people's reading, collections and services, in adult reading and services, and in administration; 2) the emergence of a few courses related to "special publics" or "special approaches," such as those in storytelling, public relations, urban libraries, audiovisual materials, mass communications, intellectual freedom, and public library systems. These somewhat different approaches are often combined in a single curriculum, and typically both are treated as electives among which the student selects at will. Both categories of curriculum offerings are seen as supplementing a core course program in which the major library functions (collections, their organization, information service, administration) are presented with illustrations drawn, hopefully, from many library contexts.

Nancy Freeman, of the University of Minnesota faculty, has prepared a paper at the University of Wisconsin Library School on "The Organization of the Adult Services Curriculum," searching for evidence of Ralph Tyler's three criteria for effective curriculum organization: continuity, sequence, and integration.[12] Typically the one-year program offers little opportunity for *continuity*, the vertical reiteration and expansion of concepts over time; although in children's work the program sequence of children's literature, children's services, and storytelling allows this, as do the now-familiar sequences of public libraries, public library systems and reference or subject bibliography. *Sequence*, the progressive development of a subject marked by prerequisites, is a more common achievement, with such courses as "public library systems" dealing with new aspects, or a familiar aspect in greater depth, than the courses in "public libraries." Freeman found in the adult services field, however, that even carefully planned sequences are seldom required of students. *Integration*, the coordination of the major curriculum elements to demonstrate their interrelationships, through a specific course or through simultaneous scheduling of a group of required courses, might best be exemplified in the public library curriculum in the so-called "administration" courses usually entitled "public libraries" or "work with children and youth." Freeman found no such course in the adult service field.

The University of Illinois Graduate School of Library Science produced two 1967 doctoral studies evaluating the effectiveness of library science curriculum in the areas of reference and collection building. John McCrossan found little to distinguish the methods of collection building of the nonprofessional public librarians from those of the professional public librarians, and assigned the fault to the library schools, unless "contamination" of the professional by the world of practice could be ascribed.[13] Charles Bunge found that, while professional public librarians do answer more questions and in

a shorter period of time than do the nonprofessional public library staff doing the same kind of work, the professional librarians are not more thorough nor more sensitive to the currency and accuracy of the factual information they provide.[14] The findings of these two students present a sober challenge to the curriculum.

In some ways an even more devastating assessment of education for public librarianship was implicit in Anna Hall's *Selected Educational Objectives for Public Service Librarians.* Having established a group of "public service tasks" through a group interview with practicing public librarians, Hall sought to analyze the curricula of a group of accredited library schools for their preparation for these tasks. Only *five* of twelve schools surveyed offered enough in course reading lists, examination questions, class assignments, and interviews with faculty to make the curriculum analysis possible. Her findings are equally challenging. Hall analyzed the level of comprehension and ability required by the practicing librarians for these tasks and compared this with the level of goals sought by instructors in the library schools. With rare exception, the emphasis in library education was at the most elementary level of factual knowledge, while the practicing librarians saw a much greater need for "comprehension," "application," "analysis," "synthesis" and "social skill." Only in "evaluation" of the task did the library educators exceed in goal the needs seen by the practicing librarians. The gap between need and education was greatest in the area of "social skill" for public service tasks. Hall concluded that in the area of public service tasks, education is typically at the "awareness" and factual knowledge levels.[15]

CONCLUSIONS AND RECOMMENDATIONS

Let me make explicit the few conclusions that are implicit in this analysis of curriculum for public librarianship:

1. The curriculum for public librarianship is probably inadequate in most library schools, and an objective, broad evaluation of a group of curricula in this area is greatly needed. This is my primary recommendation.

2. The time for specialization in education for public librarianship has arrived. Both the ancient Miss Fuzzywig and the more recent Miss Ponytail are outmoded concepts of the public librarian. The day of the "special publics" approach is here. Short-term internships and laboratories, such as High John, are needed for work with special publics.

3. A curriculum that extends to two years of professional study, interrupted most usually by an internship or work period in an

accredited public library in a truly professional position, should be envisioned.

4. An interdisciplinary approach to the preparation of public librarians should be explored.

5. Sound educational methodology should be employed in constructing alternative curricula and in selecting teaching methods for the preparation of a variety of special positions in public library administration, collection building, reader services, and technical services.

These are the action pieces. The content of such a curriculum is inherent in the discussion here; the goal for such a curriculum is the development of aware, knowledgeable, competent librarians able to exercise sound judgment and to adapt swiftly and soundly to the changes which their broad education enables them to perceive.

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PREPARATION OF THE SCHOOL LIBRARIAN

The dual role of the school librarian as a specialist in education and as a specialist in librarianship creates special problems in designing his professional education. Recent changes wrought by technology upon both education and librarianship introduce new complexities and exacerbate earlier issues which were never entirely resolved. For example, technology has markedly expanded and changed both the function and field of the audiovisual specialist. The 1969 *Standards for School Media Programs*,[1] recommending a unified library-media program for the school and unified or closely coordinated education in library science and audiovisual instruction, has influenced both fields to reexamine their curricula.

In an earlier article[2] I attempted to identify significant questions for school library educators planning for future collaboration with audiovisual educators, by comparing the joint recommendations in the *Standards* with the unilateral proposals of audiovisual specialists.[3] These official statements, I reasoned, might reveal differences in viewpoint pertinent to any joint planning between the two groups. These present remarks build upon the earlier article, noting recent policy statements, projects and studies, possible approaches to curricular change, and major questions related to it.

CURRENT STATUS OF PROFESSIONAL SCHOOLS IN THE MEDIA FIELD

The scope of the educational problem facing us may be sketched in by noting recent data about programs, enrollments, and degrees. Two hundred forty institutions with enrollments of 16,792 offer undergraduate programs in library science; fifty-eight of them offer both graduate and undergraduate programs; the majority of the undergraduate programs emphasize school librarianship.[4] One hundred eighteen institutions provide graduate programs in library science, 104 in instructional technology.[5] Enrollment at the master's level in library science is more than five times larger than in instructional technology (10,577 to 2,093) and the number of master's degrees conferred more than seven times larger (4,606 to 617). At

the intermediate (or sixth-year level) and at the doctoral level, the ratio is reversed. Only two-thirds as many library science students are enrolled for sixth-year degrees (157 to 232) as are instructional technologists, and only half as many have earned degrees (20 to 43). At the doctoral level in both enrollment and degrees, the ratio is four to one in favor of the instructional technologist (875 to 239 and 108 to 21).

With the current difficulties in funding elementary and secondary education, we may be producing a surplus of graduates for school and library-media positions as defined. Without up-to-date evidence about manpower needs and supply this observation is an educated guess. If leadership positions in media at the district, state, and national level, however, require advanced degrees, these data suggest that candidates for them are far more likely to have studied in the field of instructional technology than in library science.

Another trend of import to school library educators is the experimentation and new directions in the professional schools of library science and instructional technology. In 1968 Asheim noted that most accredited library schools have added information science to their programs, either through special courses, more comprehensive special programs, or by assimilating fundamental concepts of information science into the entire curriculum.[6] The Curriculum Committee on Education in Information Science of the American Society for Information Science convened at Pittsburgh in the fall of 1968 to define the professional pursuits in each of three areas of specialization in information science (information science in the pure sense, systems-oriented information science, and library science-oriented information science) and the knowledge required of the practitioner in each.[7] Reports in current library literature suggest a variety of experiments in library school curricula in response to changing demands of clientele.

Two extremely different conceptions of instructional technology are apparent. Saettler labels them the physical science concept and the behavioral science concept.[8] The former, the traditional and dominant concept, defines educational technology as hardware and software and focuses upon their use and effects as aids to instruction rather than with the purpose of teaching and learning. The behavioral science concept views as fundamental to instructional technology the application of theory from the disciplines within the broad area (e.g., anthropology, psychology, and sociology) and the more specialized areas within them (such as psycholinguistics, perception, cognition and communication theory). It argues for applying scientific knowledge to provide a conceptual basis and methodology for the design, development, and evaluation of instruction. Its proponents envision preparing high level specialists (e.g., systems programmers, computer technologists and learning biochemists), as well as ''a new

breed of educational generalist who could provide leadership in the design and management of instructional systems in a research and development setting."[9] Dominant are curricular areas such as instructional design and development, message design, learning systems technology, systems design and management of learning resource programs.

Thus, the two major professions addressed by the *Standards* are each involved in somewhat similar attempts to harness technology—the librarian through information science for transfer of knowledge and the educational technologist through instructional technology for learning and teaching.

An important postscript to this brief summary of the current status of professional schooling in the media fields is the growing number of junior and community colleges which offer training programs for library technical assistants and audiovisual media support personnel. The *North American Library Education Directory and Statistics, 1966-68* identifies fifty-seven institutions providing library technician training, fifty-three of which were community colleges; eighteen additional institutions reported planning to initiate such training or conducting a feasibility study.[10] A recent Department of Audiovisual Instruction (DAVI) project polled colleges to locate training programs for instructional technology support personnel and found eleven.[11] This training has implications for the education of the school library-media specialist, particularly in terms of the job market and in preparing for supervision and performance evaluation of such supportive staff.

RECENT STUDIES AND POLICIES

Leaders in the two professional organizations concerned with the school library-media program not only formulated the new *Standards*, but also have initiated several major projects to assist their professional schools in revising curriculum. The School Library Manpower Project of the American Association of School Librarians, funded by the Knapp Foundation of North Carolina, is a five-year study of task analysis, education, and recruitment of school library personnel. The project was organized in two major phases. Phase one (planned for a two-year period for which the final report is tentatively scheduled for fall 1970) consisted of two undertakings: 1) to identify the tasks now performed by all personnel in school library programs, and 2) to determine requisite knowledge and skills and to develop guidelines for the education of the media specialist. Phase two is planned for a three-year period and calls for the development of two experimental undergraduate programs and four graduate programs of library education.[12] The first step of this second phase occurred in the fall of 1970. Three planning clinics were held for

personnel from institutions interested in developing experimental programs (in Denver on October 5, in Cleveland on October 7, and in Atlanta on October 9). From these deliberations came directions for evaluation and selection of the funded programs. Following these comes final definition of the program by the manpower project staff and a panel of experts, and the selection of institutions to develop the experimental programs. According to the original project proposal, the experimental programs funded will focus on specific target groups, such as certified teachers interested in specialization in school librarianship, students studying for certification as teachers, and mature people with an education background who are interested in returning to the field.[13] The development and evaluation of the experimental programs and dissemination of the results constitute the final phase of the manpower project.

As a result of early steps in phase one of the project, the Knapp Manpower Project has published to date several tools of potential use to school library educators. These publications were the work of the NEA Research Division with the assistance and direction of the project director and the project advisory committee. The *Task Analysis Survey Instrument*[14] was developed through an extensive search of the literature and consists of a 300-item checklist of tasks representative of twelve major categories of duties; the items were deliberately scrambled in the instrument but were restored to the twelve original categories in the analysis of the responses. The major publication now available from phase one is the final report of the *School Library Personnel Task Analysis Survey*[15] which analyzes the responses from the 2,000 school library personnel in 694 schools—455 secondary and 239 elementary—identified as having outstanding media programs. The Task Analysis Survey supplies data hitherto unavailable about the variety of responsibilities carried out by librarians, assistant librarians, audiovisual specialists, technicians, paid clerks, and district or contract personnel. Its sample was comprised of schools which now provide the staff and services deemed by school library leaders as requisite for excellent programs; if its criteria for excellence were valid, the tasks identified are those which library schools should be preparing their students to do in the immediate future.

The survey instrument has several limitations which narrow the usefulness of the findings. It required the respondent to check whether or not he performed a given task, but it did not ask him how frequently he did it or for how long a time. Another difficulty is the variation in specificity of the task statements. In the technical categories (e.g., circulation, preparation of materials, and acquisition), tasks were described in detail—"opens new books and collates pages," "hand letters materials," "calls in material on loan when requested elsewhere." In categories such as administration and

instruction appear such complex items as "plans for expanding program of media services," "confers with administration concerning library operations and budget," "assists with independent study," "guides reference and research work of small and large groups." Precisely what the librarian "does" in carrying out these tasks would be useful to know if educators are to attempt to help students learn them.

The next step of the manpower project was clustering the task analysis results into job descriptions. A special committee developed definitions for the following positions: district media director, head of the media center, media specialist, and media technician.[16] Each definition describes the nature and scope of the position, major duties, and knowledge and abilities necessary for the position. A second committee worked from these definitions to develop objectives for a school media specialist education program and the areas of competencies needed for performance by a school media specialist. They defined each area and formulated statements in behavioral terms describing the knowledge a graduate must possess. The areas were seven: management; media; learning and learning environment; planning and evaluation; human behavior, development and interaction; professionalism; and research.[17]

The next publication from the Knapp Manpower Project, scheduled for release in September 1970, is the set of guidelines for institutions interested in developing one of the experimental programs.[18] The guidelines manual is to incorporate the occupational definitions of the four major positions as well as recommendations from three regional conferences, held during the spring of 1970, about special problems in school library-media education. The Knapp Manpower Project staff has a complex assignment in synthesizing its survey data with the variety of views from the practitioners, generalists, and specialists assembled for the two special committees and the three regional conferences. It is to be hoped that its guidelines will assist all institutions preparing school library-media specialists in a reexamination of their curricula. More important will be the design of the experimental programs funded. If they offer sufficient variety and uniqueness, they may answer the major questions which confound us.

A second recent development related to school library education was the adoption of the ALA policy proposal on "Library Education and Manpower" by the Council at the 1970 Detroit Conference. The policy's insistence that undergraduate courses in library science be concentrated in the last two years and not constitute a major inroad into the basic disciplines continues the standards established in the ALA accreditation guidelines of the 1950s. Its recognition of positions in libraries requiring non-library related qualifications and of the need for supportive staff of a technical and clerical nature harmonizes with similar recommendations in the *Standards*.[19] The

vigorous objections to the new policy by school librarians apply mainly to the label of "supportive personnel"—to those who have not achieved a master's degree. Some also fret that the official policy will seriously conflict with the results of innovations to be tested in the experimental programs funded by the Knapp Manpower Project. Lacking information about the guidelines for the Knapp experimental programs, I cannot comment upon this concern other than to question the implication that a media specialist as defined in ALA's "Library Education and Manpower" statement and in the American Association of School Librarians' *Standards* can be prepared in less than five years.

The Department of Audiovisual Instruction also undertook in 1968 a study of manpower and instructional media. Its interim report, *Jobs in Instructional Media*,[20] and the project itself are best known by the JIMS acronym. The study analyzed jobs in precise terms to establish a fund of data which could be used to restructure jobs and to recommend training for them at the technician level. Both this project and the Knapp project recognized early the need to break down jobs into discrete tasks. The project staff went further, however, and approached tasks from two directions—what the worker did and what got done. It collected data through direct observation of some 110 people (40 percent professional and 60 percent paraprofessional) at work in schools, colleges, industry, government, and military sites.

The technique in data collection was that of functional job analysis, used since 1934 by the Department of Labor, with modifications devised by Sidney Fine. Functional job analysis provides a method for objectively describing what the worker does (in relation to data, people, or things) and systematically classifying the tasks involved according to a level of complexity. In addition, analysts were trained to gather information about the general education development needed to perform the task. The functional job analysis used by JIMS also included a third measure—a scale of worker instructions. In order to relate the generalized skills located through the functional job analysis to the instructional media field, a model—the domain of instructional technology—was developed: "its components (the men, machines, materials, ideas and procedures that are organized and applied to solve instructional problems), and its application and organization (the Instructional Development Jobs and the Instructional Management Jobs, or the functions which need to be performed in order to meet the objectives of the field.)"[21]

A two-dimensional matrix was built from these two methods of describing the media field which permits simultaneous comparison of what the worker does and what gets done. The matrix offers a variety of ways to organize and structure jobs, career ladders, and curriculum according to the objectives and constraints of the job center or the training center. If an organization which performs any

instructional technology function and a training institution uses the matrix, they can coordinate both jobs and curriculum. As in the Knapp project, the JIMS study contains a large amount of information related to the more technical aspects of instructional technology— production, support and supply, management functions—which was its central aim. It also is limited in data about other functions (e.g., utilization, evaluation-selection) and did not consider the frequency of performance of the tasks.

A second major study of the instructional technologists is the Media Guidelines Project funded under a U.S. Office of Education grant. Its major purpose was to assist those concerned with the design and appraisal of media training programs.[22] Project activities included mapping the media domain, analyzing tasks in current media-related jobs and clustering them by type and function, predicting media training needs in the coming decade, formulating guidelines for training, and reviewing the media technology literature related to training. The culminating task of the project, the publication of *Media Guidelines* and *Guidelines Manual*,[23] summarize the results of these activities.

The media guidelines use essentially the same model of the domain of instructional technology as that employed in the JIMS project. One dimension of the model comprises media functions: those involved in *operations* (research and development, design, evaluation, production, logistics, utilization) and those involved in *management* (organization, information, and personnel.) A second dimension consists of *responsibility* groupings—directive-administrative, professional, artistic-production, technical, clerical, and manual. These categories were established from evidence obtained in interviews of a sample of 200 people in media jobs in a variety of institutions. The interviews produced some 3,000 separate job activity descriptions which were categorized, coded, and clustered into six groups, each different from one another and each made up of activities highly similar. The third dimension of the model consists of the institutional settings wherein media activities take place.

The use of the *Manual* as a tool for preparing and evaluating proposals for U.S. Office of Education support is evident in its makeup with a fourteen-page guidelines checklist and the listing of recommendations for media training priorities. It is interesting to note that it gives top priority in training media personnel to design and utilization specialties at the administrative and building level and to the logistics specialty at the technician level.

What is the relevance of these educational technology projects to the school library educator? A rough comparison of the Knapp Manpower Project and the two technology projects shows some similarities and major differences. Each employed job analysis, the librarians used a checklist describing tasks in operating an excellent

media program, and the instructional technologists interviewed a smaller sample of workers. Each study used tasks or activities as the basic unit of data and combined them into categories. The important differences for us are in the functional categories. The library study uses those associated with school libraries—selection, organization, acquisition, instruction, etc.—to which are added newer functions such as production and preparation of materials. The instructional technology studies label such functions as activities and insert them into entirely different categories. For example, the school librarian finds his traditional functions of selection, acquisition, and organization grouped into a single category of logistics (or support and supply function) while his instructional and interpretative functions appear in such categories as the evaluation function, the design function, the utilization function.

These differences underscore the need for communication between the two groups. We need to understand which of our apparent differences are semantic and which are substantive. School librarians see themselves as participating in curricular planning, in assisting teachers in coordinating instructional materials and services with study units, and in evaluating the adequacy and suitability of materials and services for learning. The instructional technologists systematize these functions and separate them into major components identified as design, utilization, and evaluation. They focus upon services to the teacher, neglecting the informal interpretative assistance to the individual student which the librarians have traditionally emphasized. We must come to closer agreement with our colleagues in instructional technology about the major competencies basic to the responsibilities of the media specialist operating in the individual school and the school system.

It is important, however, to recognize the limitations of job analysis, as employed in these three projects, to design curriculum for a professional group. It aptly describes the overt behavior of a task—the simpler the task, the more valid the analysis. Statements which describe activities as "provides reading, listening, and viewing guidance for students and teachers," or "prepares learners to effectively interact with media," fail to explain the essential elements in the task. Job analysis also ignores the question of whether the librarian/media specialist is doing what he *should* be doing. Thus the curriculum designer has to refine the job analysis data. He must determine whether the activity is appropriate and what the student must know to perform a clearly defined task. He must break down the more ambiguous tasks into their essential components. The *Media Guidelines* and *Guidelines Manual*, however, in their grouping of data under function comes the closest of the three studies to identifying the specific activities which make up the major tasks.

Not all studies useful to school library educators for curricular

design are based on job analysis. The 1964 study developed by Stone relied on the judgment of scholars.[24] Four were tapped from the fields considered closely allied to educational media—audiovisual, library science, broadcasting, and instructional technology. They were commissioned to propose programs from the perspective of their specialty to prepare personnel for the traditional and the new functions in educational media. Meierhenry, the project director, synthesized the individual reports for the fifth, sixth, and seventh year programs, by identifying the common core of competencies and the unique competencies required only by the specialist. It is noteworthy that the projected educational programs specified both common and specialized skills at each level. The study continues to be a source of data for curricular planners despite its date.

DESIGNING NEW PROGRAMS

Let us now consider the various problems of designing new programs for the school librarian, recognizing that they will vary in terms of our institutional constraints. We school library-media educators may be a part of a library school, graduate or undergraduate, single-purpose or multi-purpose. We may be a unit within the school of education which offers a scattering of audiovisual courses or an organized program of study for a master's, sixth year specialist, or doctoral degree. We may be starting from scratch and planning to initiate a new curriculum. (Educators in this last category may be the most fortunate.)

Our first problem relates to the timing of our curriculum planning. Do we continue the status quo until we thoroughly re-evaluate our course offerings, or do we make some immediate changes and at the same time plan for a systematic re-evaluation? A cursory review of the *Standards* points up the need for school librarians to develop competencies with nonprint materials in the traditional library processes of selection, acquisition, organization, and interpretation and to be able to supervise the production of simple instructional materials and the operation and maintenance of equipment. The concept of a unified materials center has been with us for several decades, and most of us now offer at least a patchwork of courses to give our students these needed competencies. If not, the pragmatist in me recommends making some immediate adjustments.

Our experience in curriculum revision for school librarians at Wayne State University suggests that systematic revision takes several years at best. In the meantime, schools are seeking librarians competent to work with both print and nonprint materials. One immediate decision facing us is the question of how much our students should know about equipment operation and production. According to the *Standards* these are the proper functions of a paraprofessional

staff, but many schools lack such supportive staff. To close this paraprofessional gap by giving academic credit for learning how to operate a 16mm. projector or produce a transparency offended our sense of propriety at Wayne. As an immediate answer to students' needs we established a workshop in the selection and utilization of learning resources in which students related varied types of learning resources, primarily nonprint, to specific instructional problems from their teaching (or student-teaching) experience. Laboratory sessions arranged with the university audiovisual utilization services taught them how to operate equipment and produce simple learning materials, but the focus was upon specifying behavioral objectives for a learning problem and designing the media to bring about desirable behavioral change. When we completely revamp our curriculum I am sure this workshop will be dropped, but it answered an immediate need while we dug into fundamentals.

The conceptual framework is another problem in curriculum reform. Larson reported that a graduate program at Indiana University to train instructional design and media specialists was organized into three major curriculum areas—materials and administration, production, research and theory—and the careers within them.[25] Committees for each area identified career opportunities, specified competencies required, and the scope and sequence of course work, laboratory, and internship to attain them. From this work the faculty agreed upon thirteen areas of professional education emphasis. This approach is possibly more relevant to a multi-purpose library school or instructional technology department. Process or function such as the models devised in the JIMS study offers another conceptual framework. Translating competencies into behavioral objectives can aid in pinning down learning goals. What should the student be able to do? Without the precision called for in this question, recommendations in the *Standards* about inclusion in the curriculum of information science, communication theory, and design of instructional systems have no meaning.

Another problem in planning curriculum revision for some schools may be the program level at which to start, i.e., undergraduate, fifth year, or sixth year. At this point in time I believe our most urgent task is to develop the curriculum for a five-year program. I find no justification for a four-year program and many reasons to support the five-year program. In a recent analysis Johnson pointed out the difficulty in accommodating two professional sequences (for teaching and school librarianship) within a four-year program.[26] The library courses cannot supplant either the liberal arts or the education components. Although part of the work in education, e.g., student teaching and methods, can be handled as library education, the preservice librarian is thereby handicapped in working later with students and teachers. Johnson questioned whether eliminating the liberal arts

requirements does not cheat the student of the general background which a college education should provide, and moreover, handicap him for master's study in both academic and professional areas. I also believe, however, that there are advantages for starting professional study during the last two years of the undergraduate program. More students may be recruited, and preservice teachers may learn from fellow library students about how it is in the modern library.

Our experiences at Wayne State University attest to the school library students' desire for teaching experience. Prior to 1965, our department offered an undergraduate major in library science and student teaching took place in both the elementary and secondary library. This program enhanced students' flexibility in employment, but at the expense of learning how to teach in the classroom. The better undergraduates were outspoken about having been shortchanged. Our current undergraduate program, a minor only, requires student teaching in a student's major and the prerequisite methods courses for such teaching. My colleagues in education report library science students excel at spreading the word about library resources and services in their methods courses and have recruited students for the library science program. Furthermore, the requirement of successful classroom student teaching discourages (or eliminates) those who fear the prospects of working with groups of children. It is a useful criterion for admission.

Another problem in curriculum revision is deciding who the participants should be and at what point they should join forces. Do school library educators and instructional technologists work together from the beginning, or does each department organize a curriculum and then negotiate? When should one involve specialists from other disciplines and colleagues in the library science department? When should one involve students and recent graduates?

Our answer at Wayne was for each department—library science and instructional technology—to work separately on curriculum. Stage one is now completed but the necessary review and syntheses have not taken place. When we meet in the fall of 1970, therefore, we will be one full year behind our preliminary schedule. Our aim is for a joint fifth year program for the school library-media specialist. In the interim, we have identified courses in each of our fields which we require of our students. The library science department contributes courses in reference, organization, selection and utilization of materials, and the operation of the media center; the instructional technology department contributes courses in technology, in education and instructional design. The two departments also collaborate on a joint sixth year specialist program which we view as an interim answer to the need of our graduates in the field to overcome deficiencies in library science or instructional technology, and to undertake advanced study in curriculum development, educational psychology, etc.

A master's degree in library science or instructional technology is required for admission, and programs are tailor-made for each student.

During the course of curriculum review and planning a number of old issues rise again. For example, if a five-year program starts during the fourth year, should the undergraduate program be so arranged as to produce a library science minor? If so, for what role are we preparing this teacher-librarian? And, an immediate practical question in 1970—What effect should manpower demand have upon the school's undergraduate program? Do we discourage the four-year student from taking employment? As competition for school library positions has increased in the metropolitan Detroit area during the past year, our undergraduate library science minors report two varied reactions to their job applications. Some school systems reject them in favor of candidates with fifth year degrees; others select them rather than the M.S.L.S. candidate because their salary will be less!

A second issue in curriculum planning—Do we concern ourselves with what the media specialist is now doing or what he should be doing? Saettler, as an example of many in the instructional technology field, warns about the traditional preoccupation with media and technique rather than with the purpose of teaching and learning: "As a consequence, someone orders a number of overhead projectors and dumps them into classrooms where no one knows what to do with them; or a school installs a closed-circuit television system or a language laboratory in the absence of a searching examination of the purposes to which these media are applied."[27] King, commenting on the situation in New Jersey, asks: "Where are instructional materials specialists going to acquire the skills needed today? Our colleges are not prepared to offer work in educational television, information retrieval systems, talking typewriters, and computer-assisted instruction. We find that our schools are ahead of our teacher education institutions."[28] On the other hand, many audio-visual specialists (as librarians before them) find it difficult to convince faculty of their usefulness in curriculum planning and design.

In determining the desired competencies of a graduate of the fifth year program, some questions must be reckoned with. For example: Is there a core of competencies all school media specialists should have? Can a five-year media program accommodate specialized competencies? How should this specialization articulate with areas of specialization available in sixth year and doctoral programs? To what extent must we fragment courses to insure these competencies? For example, do managing and administering the media program in the elementary school differ sufficiently from the high school to require separate courses? Does the school media student require a tailor-made course in cataloging and classification to attain

competency in these fields? In short, the basic question will probably be: Are separate courses necessary or can the student make his own application of general theory?

The test of competency as a guide to curricular revision must confront the problem of certification. At the Western Michigan University Institute for State Media Personnel, one of some seventeen statements from the *Standards* which received greatest agreement was: "Media specialists who are responsible for instructional decisions should have teacher certification."[29] Does teacher certification imply certification as a classroom teacher or as a school media specialist? How do we provide professional education for the liberal arts graduate who starts his teaching and his library courses in his fifth year? Answers to these questions about the five-year program require joint study between media educators and their colleagues in education. Together these specialists also should identify essential components in sixth year and doctoral programs for the school librarian or instructional technologist preparing for administration, supervision, or research.

As a part of this dialogue there should be frank discussion about the perennial issue of preparing teachers and administrators for using media resources and services. Although school library educators have acknowledged this responsibility for several decades, studies during the same period show that only a small proportion of teachers receive such instruction and only a small proportion of teachers colleges offer it.[30] Swenson concluded from her 1967 survey of provisions for educating teachers in library resources and services in colleges offering undergraduate library education that there was widespread agreement about the desirability of such instruction but marked diversity about how to arrange for it.[31] Some colleges offered special courses; some encouraged teachers to enroll in library science courses planned for the librarian; others taught special units about the library in teaching methods courses. In only 27 percent of the colleges in the Swenson study were library science courses required of prospective teachers, and most of the required courses were on children's literature rather than on the use of school library media and services.[32] Required courses in audiovisual resources, on the other hand, abound in teacher education. As we consider coordinating library science and instructional technology programs, we should explore the possibility of broadening the required audiovisual course for teachers to include learning about print materials and services of the school library, and of teaming a librarian and an instructional technologist for the instruction.

As the status studies cited in the first section of this paper revealed, there is a clear need for programs at the sixth year and doctoral level in the school library field. We need to map out areas of specialization within the area of library and information science

which are of relevance to school library service in the individual school, in the school district, in the intermediate district, and in the state. Our field needs basic and applied research to extend theory and to experiment with solutions to present problems.

ADMINISTRATIVE CONCERNS

The changes necessary in the preparation of school librarians cannot take place without administrative support from the university in terms of staff, resources, and facilities. Along with our identification of competencies needed by our graduates should come a parallel identification of competencies needed by the faculty. Although interdisciplinary research and area studies are common in the modern university, the faculty in many library schools is too small to offer the instruction within their own discipline needed to prepare the school library-media specialist. The lag in school library curriculum change and research is one obvious result of this deficiency.

The university administration must also provide adequate resources for the unified media program: trade and textbooks for children and youth; nonprint materials and equipment, including models and games; installations equipped for dial-access, computer-assisted instruction and programming; closed-circuit television; laboratories for student production of learning materials; sample equipment and facilities. The media program will also require access to school media centers with modern facilities and services where the prospective media specialist can have internship experience.

The designation of the degree for the new five-year program is also an administrative matter. Library schools may continue to award their professional degree. They may wish to establish a joint degree with the college of education, e.g., M.S. in Education, with specialization in media. (The schools or departments of library science and instructional technology might even come up with a M.S. in M.S. degree.) I am convinced, however, that we ill serve both the student and the school library media field if we fail to acknowledge the special character of the school library education program. The school library degree does not provide an entry into *any* library; it is designed solely for the school no matter how it is named.

Some librarians and some audiovisual specialists vigorously, even bitterly, oppose the recommendations for the unified media program in the individual elementary or secondary school and any merging of their respective professional education. They worry in public about damage to potential services from both programs as a result of the merger, and they worry in private about a take-over in this field by

their rivals. Coordinated programs may not be possible but I believe we have a professional responsibility to try to create them, and the *time is now*. Viewed positively, instructional technology offers new opportunities for the school library student, but the library science contribution to his preparation remains a vital one.

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PREPARATION FOR SPECIAL LIBRARIANSHIP

Preparation for special librarianship was characterized in 1967 by a former president of the Special Libraries Association as having "no uniformity of concept, no regularity of output, no standards of accomplishment, no recognizable goal to attract more people to such work."[1] The situation has not changed appreciably, and it would hardly be possible for me to improve on Eugene Jackson's indictment, either in inclusiveness or in succinctness. It is possible to change the emphasis of what followed that indictment. Jackson emphasized the need for "more"—more students, more courses, and more quality, though he did not define quality. I am going to focus almost entirely on quality, and I hope to be quite specific about wherein I think present quality can be improved upon and how. What I will project for the betterment of preparation for special librarianship will not be easy, and it will not be inexpensive in either time or money. There are, however, other justifications.

THE SITUATION AND THE NEED

Certain characteristics of preparation for special librarianship in the past decade should be noted before we proceed to recommend changes. The library schools seem to be divided about half and half at the present time into those that offer no specific courses for special librarians, and those that do offer labeled courses. This is the result of an old argument, and the details do not need to be repeated here since they have been well expounded in library literature.[2] To me the argument is a low priority one, and I intend to get on to matters that, in my opinion, have a much higher priority. Since it is easier to see what is being offered by way of formal preparation where there are specific courses, the remaining characteristics relate primarily to those courses.

Most of the special libraries courses are surveys: descriptive surveys of the types of special libraries in the gamut of subject specializations (humanities, social sciences, science-technology), and in the gamut of parent agencies (business, industry, government, non-profit agencies, academe). There are surveys of administrative

problems for librarians in these environments, surveys of materials used in special libraries and not typically included in other library school courses, and surveys of services considered to be more typical of special libraries than of other kinds of libraries. Sometimes a super-survey includes all of these topics.

Most of the teachers of these courses are part-time teachers. Their personal experience is vital and immediate, but limited. This same personal experience also includes the daily pressure that keeps most of them from attending faculty meetings, participating in faculty committees, and, in too many instances, from being available at critical moments for counseling and tutoring students. Since their primary role, in society and as breadwinners, is in relation to the library arts, they cannot devote the same time and attention to mastery of the teaching arts. Though their motivation is unimpeachable, and their enthusiasm unexcelled, their teaching skills are frequently limited to lecturing and leading discussions based on required readings. Rarely do they devise fresh materials for their courses.

The courses in special librarianship have a remarkable intimacy with the field, and a curious dissociation from the remainder of the library school experience. The intimacy stems from the teacher's relationship with the world of practice and his "how-to-do-it" attitude, and from the publications used as teaching materials, nearly all of which emanate from other practitioners telling how they do it. The dissociation stems from the teacher's separateness except in isolated capsules of time from the other faculty, from the total library school situation, and from the students themselves. Another factor in the dissociation of the preparation for special librarianship from the rest of the educational experience is that the full-time faculty often displays an apathy toward special librarianship and toward special libraries courses. The non-special librarians on the faculty often fail to exercise the same interest in, and control over, courses labeled "special libraries" as over courses labeled "general"; and they frequently ignore special libraries completely in their basic or core courses.

There are notable exceptions to these generalizations, and some persons will think these statements are exaggerated. There is little hard evidence that can be cited. Some exists in the printed body of experience dealing with special libraries; some is becoming a matter of record through oral history interviews. Most of the evidence I have, however, lies buried in many private conversations and in much correspondence with both teachers and students. At any rate, I am convinced of the need for change, and the suggestions that follow stem from this personal conviction.

Education for special librarianship needs modern curriculum planning implemented through new classroom techniques. In this it is no different from education for other kinds of librarianship. All

education for librarianship needs modern curriculum planning implemented through new classroom techniques. This generalization does not prevent differences in the end product, however, no matter whether one considers the end product to be the curriculum itself, the students who experience the curriculum, or the service given by the students when they become working members of the profession. Neither does the generalization relate to the argument about separate courses. In what I am about to say there is no implication that preparation for special librarianship *should* be offered in a separate or in an integrated course structure. There is only the implication that modern curriculum planning and new classroom techniques will benefit the total educational offering, including that for special librarians.

THE TRADITIONAL CURRICULUM DESIGN PROCESS

Figure 1 shows what a simple process we have been using in our traditional curriculum design. First we have defined the content of one or more courses, and second we have organized this content into one or more course structures. The sum total of the courses thus arrived at has equaled the curriculum. So it has been since Dewey.
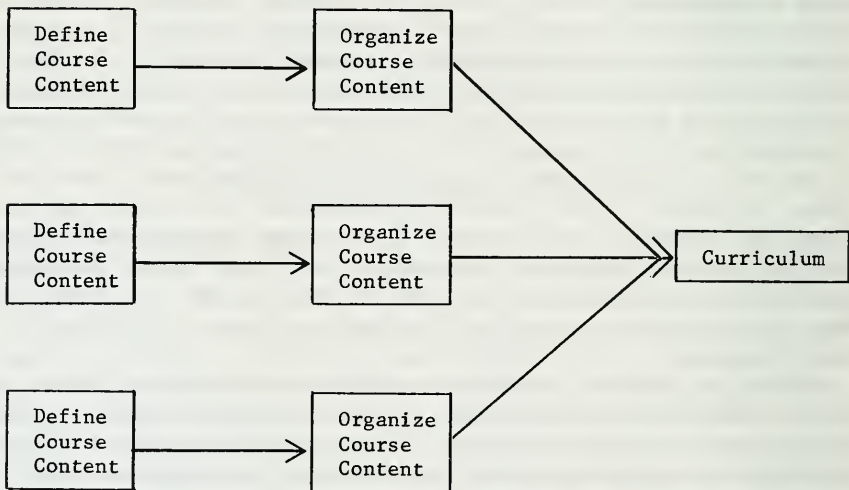
Figure 1. Traditional Course-by-Course Curriculum Design Process

Let us take a closer look at step one: defining the content. Figure 2 shows the traditional input sources. Historically, education for special librarianship has experienced input from all of the sources shown.
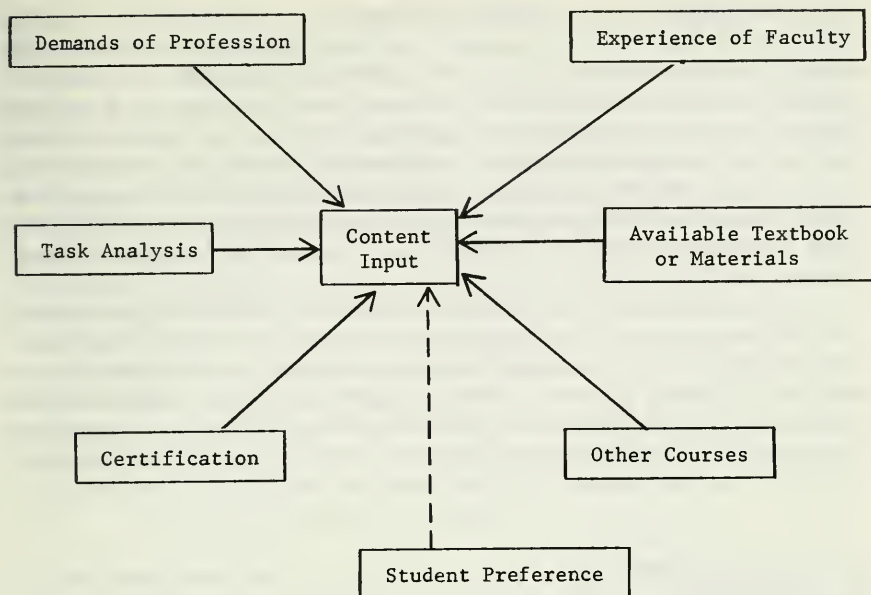
Figure 2. Traditional Definition of Content (Input)

The profession has made its demands known through its associations. The Special Libraries Association, for example, has had committees at work on the problem of defining course content almost since its beginning. One historical study identified twenty-eight relevant committees between 1923 and 1958.[3] These committees have, over the years, made recommendations based on the professional judgment of practitioners and on task analyses of actual jobs in special libraries. The Medical Library Association formalized its thinking some years ago in a plan for the certification of medical librarians.[4] Since then the statement of educational requirement for certification has become, naturally, a most important input for those schools that desire to graduate certified medical librarians. Other specialized associations, for example, the American Association of Law Libraries, are following the same general pattern.

In addition to the official committee reports and the statements of standards and certification requirements, the literature of these associations of special librarians contains many statements from individual practitioners about desirable curriculum content.[5]

In many instances courses have been built on the experience and judgment of teachers of special librarianship.[6] Very few textbooks or teaching materials in special librarianship are available, but these few have, in some instances, determined the content of courses.[7]

Some teachers have examined the bodies of knowledge in other courses in their library schools and have fashioned courses from what, in their opinions, was not otherwise available to students.[8] Recently, and very tentatively, students have been consulted in some library schools. Perhaps this has been done on an individual basis for a long time and the recent expression is merely formalization through appointment of student members to curriculum committees. Student preference is included as input in the definition of content, but with a broken line to symbolize what I believe to be its traditional tenuous influence.

Figure 3 shows the traditional constraints on the organization of the content thus defined into a course structure. These are constraints inherent in the local situation in which the course is to be taught. Recently, in some schools, student preference has been added to the other local constraints. For all practical purposes constraints from outside the individual school have been inoperative in the organization of course content, with the possible exception of certification.
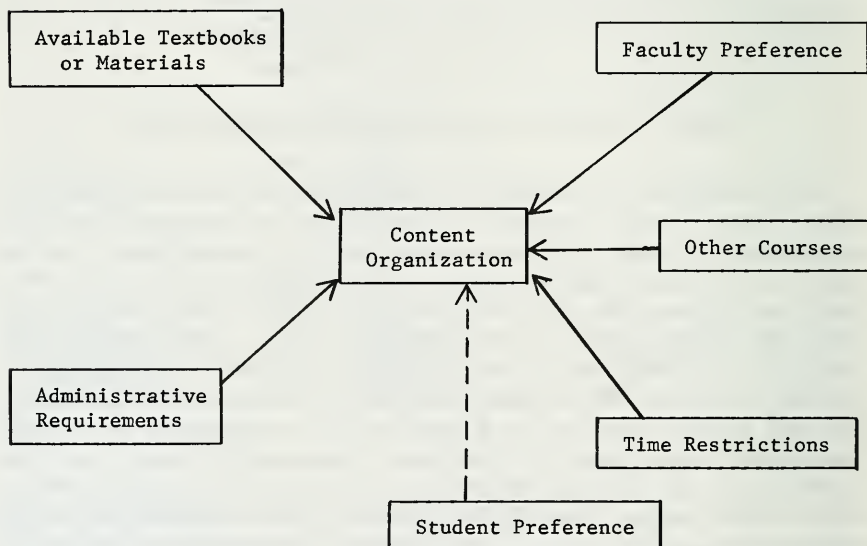
Figure 3. Traditional Constraints on Organization of Course Content

It is implicit in figures 1, 2 and 3 that, in the traditional design of curricula in library science, the curriculum planner has been the individual who would teach the course. In virtually every instance, each teacher has gathered his own input to define the course content (usually subject to faculty approval as the only real control), and then the prospective teacher has organized that content to suit himself.

This generalization is especially true in the preparation of special librarians.

The characteristics of this traditional approach to curriculum design in library science have not been essentially different from curriculum design in other professional fields, in graduate schools or in collegiate teaching generally. Then came Sputnik; in its wake, unhappily assuming guilt in what propaganda dubbed our "second rank" position in scientific achievement, American education began to try harder. First primary and secondary school educators, challenged by the harsh force of public scrutiny, sought and found new and better ways to design meaningful curricula and to implement them in classrooms. Soon collegiate educators, and those responsible for education in some professions, were adapting the new methods to the needs of their students.[9] This revolution against academic tradition has not yet exhibited itself in education for librarianship generally, or in education for any one of the library science specializations.

A NEW MODE FOR CURRICULUM DESIGN

The new mode for curriculum design is one of systems approach. It is based on several interrelated assumptions, of which only two are mentioned in an effort to simplify the description:

1) The purpose of education is to change behavior, to provide the learner with different behavioral capabilities at the conclusion of the learning experience than he had at its beginning; and

2) When one component in a system is affected, other components and the total system are also affected.

These assumptions lead educators to believe that if they provide a learner with new capabilities, they change a subsystem in the total social system (or, in the case of library science, in the total professional system); and, in consequence, the total system will be affected to some extent. Therefore, before library educators begin the educational process they must determine what capabilities they want in the human subsystem and must express these desired capabilities as the behavioral objectives of the educational process. The purpose of using a systems approach to curriculum design is to determine scientifically what these terminal behaviors shall be and then to plan learning experiences that will result in the desired behavioral capabilities.

A curriculum design process to achieve this end has been projected in a general way, and in relation to certain professions,[10] but no such systems analysis has been carried out in library or information science.[11] By combining the ideas of several curriculum design theoreticians, it is possible to project a contemporary model for the curriculum design process.[12] Before we project the complete model, however, let us note that both the input for content and the constraints

on course organization will be different than in the traditional process.

Figure 4 shows the input sources utilized in the contemporary definition of content. In this model changes in the profession provide a new and significant kind of input, justified by a recent study of education for the professions in the United States.[13] The author, Frederick Mosher, concluded that "the history of professional development [has been] generally a progress away from the rules of experience, the rules of thumb, to rules from the laboratory and other systematic research."[14] Few people will argue that library science is not involved in the throes of just such a transition; an argument could be made that the involvement for special librarianship is a matter of life or death.
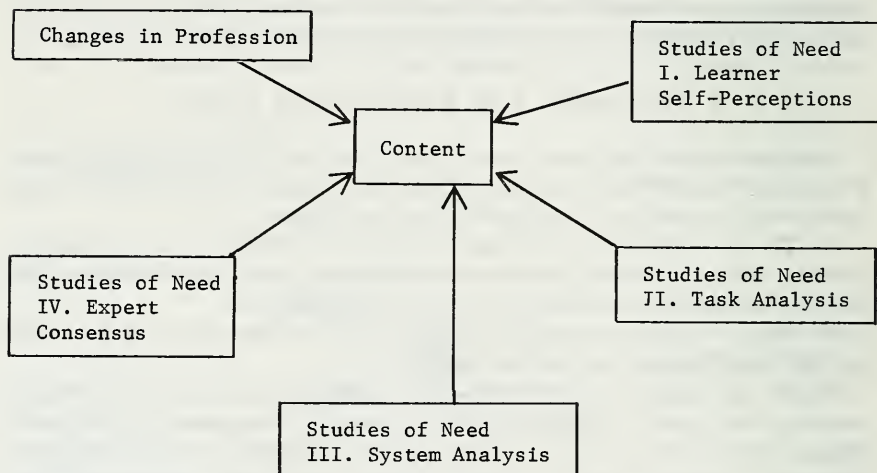
Figure 4. Contemporary Definition of Content (Input)

Mosher identified some of the problems stemming from the rapid evolution of a profession: 1) the need and difficulty of keeping up with new developments, 2) the requirement of a different knowledge base as the profession tends to become interdisciplinary, 3) the difficulty of locating relevant research carried out by researchers who are not specifically oriented to the profession, 4) the problem of translating and integrating new professional knowledge into codes of professional practice, and 5) the seeming impossibility of keeping within shooting distance of what the profession perceives to be its own frontiers of knowledge.[14] There is already a body of research knowledge relating to the impact of these problems on special librarianship.[15]

Each of the other sources of input shown in Figure 4 is an aspect of need—to be defined by objective study rather than, as in the traditional input, by subjective opinion. Education for special librarianship is beginning to build a body of data suitable for input into curriculum design in regard to the self-perceived needs of practitioners. One recent example of such a study was concerned with the continuing educational needs of federal librarians.[16] Another, though not limited to special librarians, specifically included them in an eight-state regional study of continuing educational needs.[17] The studies of the Special Libraries Association (SLA) Education Committee also contain data of self-perceived needs.[18] Such studies can result in significant input.

The contemporary curriculum design process requires that more studies such as those described above be carried out, and that they include other subsystems of learners than those in need of continuing education. There must be special emphasis on students at the master's level and on those in training for paraprofessional positions. It is true, to counter an expected opposition, that the inexperienced student often has a very muddled idea of just what he does need. On the other hand, he brings to the library school a set of interests and concerns that gives focus to his expectations of professional education. In the interest of increasing motivation—that priceless ingredient in the classroom—if for no other reason, the beginning student's expectations should be one element of input in curriculum design.[19] There is, however, another reason: student power. Students everywhere (library schools are no exception) are feeling their power and learning to influence.[20] This flexing of the fledgling muscles must be put to the advantage of the educational process.

Task analysis is also needed. Not enough has ever been done, and not enough has been done recently. As early as 1940 the Professional Standards Committee of SLA carried out a reasonable task analysis,[21] the results of which could have provided valuable input for library school courses. As recently as 1968 a research team studying medical librarianship, and using much more sophisticated methods, produced even more valuable results.[22] In between there was a small, but potentially useful, body of serious study. Most of these studies in the special libraries field, however, were devised to provide information for administrative planning in a work situation. Their value as input in the curriculum design process has been generally ignored. The analysis of present tasks should never constitute the total input into curriculum design for a profession that is changing as rapidly as librarianship, for to thus limit the design would further shrink the short half-life of professional education. Nevertheless, the practicalities of the master's level preparation as initial professional training require that attention be paid to the jobs at hand as well as to those envisioned for the future.

Inclusion of a body of knowledge from an analysis of the total library/information system assures us that the results of task analyses will not dominate the input. Any such analysis of the system would recognize the role of change and its direction in the foreseeable future, thereby injecting into the planning a factor for determining the proportions of "present" and "future" in the curriculum content. Because the changes are actually coming faster than the needed analyses can be made, there is still reason to use expert opinion as an input source. Such opinion should continue to be supplied by associations speaking for a consensus of their members, as well as by knowledgeable individuals, both teachers and practitioners.

Just as the input for defining the curriculum content is differently constituted in a systems approach to curriculum design than in the traditional approach, so the constraints on the organization of content are different. Figure 5 shows that the important constraints in the new mode stem primarily from the learner. The learner's entrance behaviors and his self-perceptions of the significance of content organization may result in a considerable need for individual instruction. To provide such individualized instruction is a primary requirement of contemporary educational philosophy and therefore a constraint on the organizational pattern. Faculty preference, so important traditionally, gives way in contemporary curriculum design to learner needs; and the constraints of other courses are taken into account in order to arrive at the optimum course sequence.
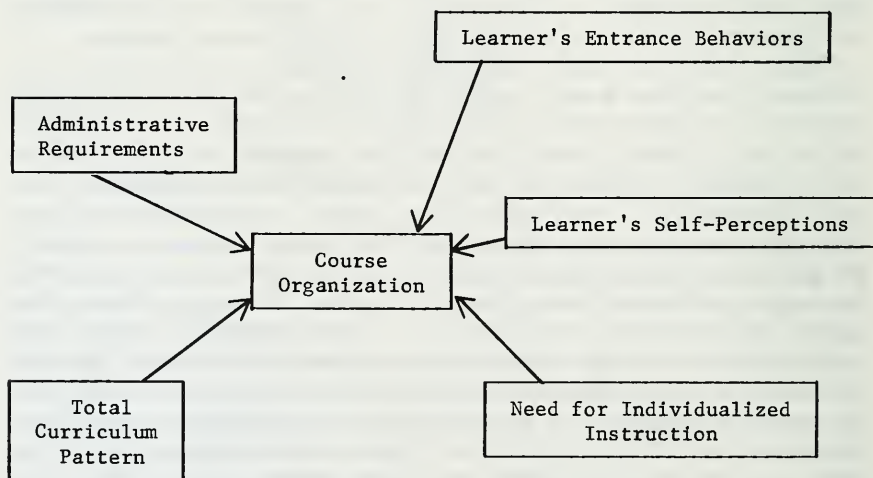
Figure 5. Contemporary Constraints on Organization
of Course Content

SYSTEMS APPROACH TO PLANNING CURRICULA

Figure 6 shows the steps in a systems approach to planning curricula. Step one is to establish the objectives.[23] In the first stages of planning a new curriculum it is often possible to establish objectives only in broad terms of desired consequences. As the input continues, however, such ultimate goals should be restated more and more precisely until, finally, specific behavioral objectives can be stated.

The desired consequence of education for special librarianship might be broadly stated: to render the working members of our society more productive through the utilization of information. This is an acceptable beginning, but by the time we arrive at the end of the design process and have considered all the input, we must be able to state more precise objectives, and we must be able to state them in behavioral terms. To achieve this goal we will have to refine and refine and refine, using every scrap of input that comes our way. Especially for the conceptual aspects of education for librarianship,
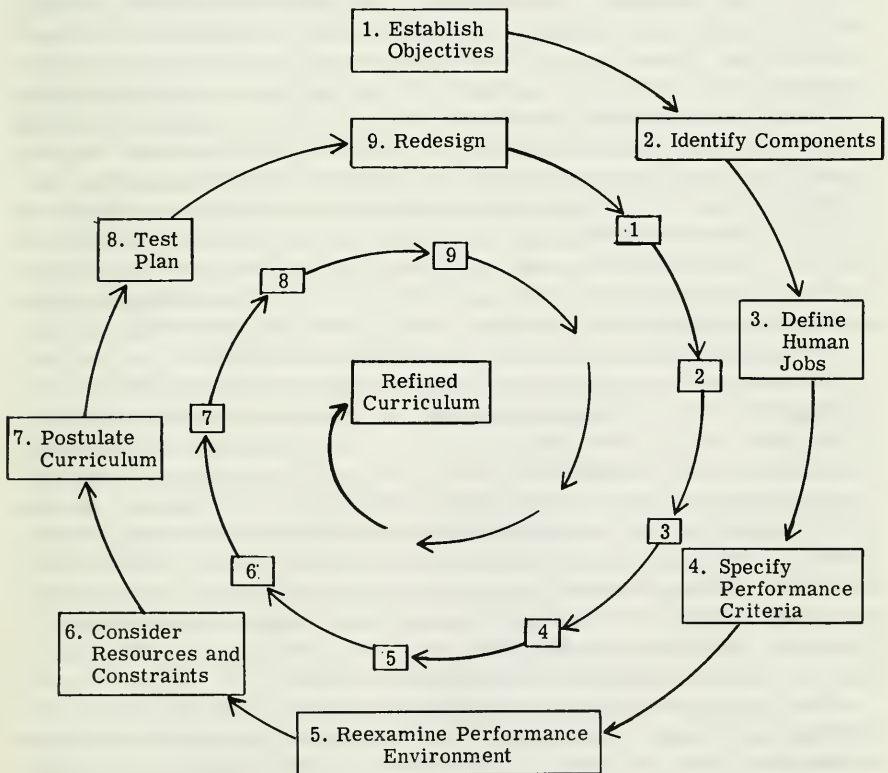
Figure 6. Contemporary Curriculum Design Process

the writing of behavioral objectives is not easy, as anyone who has tried knows. In terms of improving learning, however—of improving our chances to change the behavior of learners—it is essential that we do state our objectives in a formal way.

Step two of the curriculum design process is to identify the components of the library/information system. Human and nonhuman components must be identified and described separately because, in curriculum design, we are concerned only with the human components and the necessary interface. Other planners are at work on the design for the nonhuman components, primarily the materials and the machines. For special librarians the interface is extremely important. They must learn how to utilize machines to the greatest benefit of special library users, how to work with the specialized humans who plan and control the machine components of the information system, and how to incorporate a wide variety of traditional and contemporary materials into that system.

The human jobs that are identified in step two are, in step three, subjected to complete job analysis. This step is necessary so that new tasks added to traditional positions may be included in the curriculum and former ones, no longer actually performed, may be excluded. For example, virtually all special library administrators nowadays must be able to prepare budget justifications and program proposals. As another example, in the last SLA personnel survey over 80 percent of the respondents reported having supervisory responsibilities.[24] Are the planning and supervisory responsibilities of special librarians stressed sufficiently in the courses required of them? If not, provision must be made for adequate inclusion of these topics. Other examples come quickly to mind. To reduce the elements of subjectivity in planning our curriculum, however, an integrated sequence of formal analyses must be undertaken.

At the conclusion of these three steps the planner would have before him three definite statements to assist him in the remainder of the process: 1) the statement of overall objectives, 2) the identification of the components of the library/information system, and 3) the analyses of the human tasks required by the system. At this point the planner will probably be able to state the behavioral objectives of the curriculum with more precision than he could at the beginning of the process. Some jockeying back and forth among these first three steps will probably be necessary before it is possible, or desirable, to proceed. In time, however, the planner will have a precise body of knowledge on which to proceed.

Step four is that of specifying the criteria for the acceptable performance of each component of the human job. Such criteria have sometimes been referred to as "performance standards" or "work standards." Few such performance criteria exist for special librarianship, and fewer still are the instruments to test performance in

relation to criteria. Yet the benefits of having both criteria and tests should be obvious. Given such performance criteria, and valid testing instruments, the curriculum designer has precise terminal behaviors at which to aim his instruction. If the criteria/testing instrument combination is used as a pretest, those students who already possess the desired behavior at the desired level of skill may avoid repetition in their professional education and substitute courses whose content they have not previously mastered, thus utilizing their time in school to the best advantage. This point is extremely important to the present generation of students who label as "mickey mouse" inflexible requirements of course attendance that fail to take into account the students' demonstrable entrance skills.

In step five, the curriculum planner returns to the actual work situation with objectives, task analyses and performance criteria in hand. His purpose is validation. He reexamines the total environment to be certain that the task definition represents the optimum utilization of available human capabilities. This is especially important in librarianship where we have traditionally assigned to an all-purpose librarian tasks ranging from clerical routines to management skills. This does not refer to the old argument of "generalist" versus "specialist," but to situations in which, for example, a reference librarian answers simple reference questions one hour and designs the library's interface with an information network the next hour. The economics of business apply to special librarianship, making it essential to know what skills need to be hired for each of the library's positions. The special librarian has a wide range of support skills to draw on, including those of technician, subject specialist, information scientist, translator, as well as those of the professional librarian. The goal we are considering here is that of a curriculum that will produce professional special librarians; in this step of the design process the planner must make certain where the professional special librarian fits uniquely into the performance environment and how he is complemented by support personnel. (Ideally, of course, curriculum planning for support personnel follows the same steps and, at this point, produces a closer mesh between support and professional personnel than we have at the present time. The problem of meshing library technicians and professional librarians may well be even now approaching the critical stage.)

Thus the reexamination of the performance environment, step five, is necessary in order to adjust the job definitions that resulted from step three and the performance criteria specified in step four. Step five is, in short, a built-in quality control. Without such planned reexamination there is a distinct possibility that the curriculum design process will result only in "reshuffling the same old pack of cards," as Geis expresses it. "Making the symbols on those cards clearer and brighter does not change the basic constraints of the pack. To

generate new and useful curricula one must move outside, to a new source, to the terminal activities or performances themselves."[25]

Step six allows for the practicalities of human and material resources and the traditional academic constraints as well as those imposed by the new educational philosophies. In contemporary thinking the most significant resource, as well as the most significant constraint, is the learner himself. Some facts about the learner's entrance behaviors and his self-perceptions can be available to the curriculum planner during the planning stage. For example, observation tells us that there are at least two distinct and mutually exclusive groups of students in our master's degree classrooms, those without prior library experience and those with it. In effect, we persist in trying to carry out initial professional education and what is for many students continuing professional education, with the same curriculum, the same materials, and the same instruction. It is characteristic of special librarians that they work in libraries for some years on the basis of their subject knowledge (and quite often they work as professional librarians on this basis) before appearing in library science classrooms. Only research can tell us exactly to what extent this phenomenon occurs. The fact should be a significant constraint on the curriculum, but traditionally it is ignored. Step six in the contemporary curriculum design process would require planners to face up to it.

Step seven is the culmination of the process, the postulation of the curriculum, but it is not the end of the process; in contemporary curriculum design, planners do not assume their curricula will be successful (i.e., fulfill the objectives) simply because a document is in hand. Step eight requires a test of the curriculum *in vivo*, i.e., with actual students. This test should be as stringent, in relation to the stated objectives, as possible, and will almost inevitably result in the need for step nine, some amount of redesign.

Especially in initiating this kind of curriculum planning in library science education, it can be assumed that significant amounts and kinds of redesign will be necessary. As Figure 6 shows, this is a spiraling configuration, repeating as necessary any or all of the steps. Eventually a refined (though probably never perfect) curriculum results. There is, however, no end point, because the input is changing constantly as the profession changes, as the definition of needs becomes more precise, as the learners, teachers and other components of the educational process itself change. Also the constraints will change from time to time. This is why, in the contemporary educational philosophy, the role of curriculum planner is one of the most challenging roles in the pedagogical pantheon. So it should be in library science education.

IMPLEMENTATION OF THE NEW CURRICULA

I began by saying that education for special librarianship needs modern curriculum planning implemented by new classroom techniques, and in the general educational revolution of the last three decades, innovation in the classroom has accompanied innovation in curricula. Library science has, therefore, a wide range of model techniques which can be applied: programmed learning, instructional television, single concept films, slide-tape presentations, computer-assisted instruction, and the games and simulations which I personally am finding of significant value in teaching special librarians.

Certainly, there have been individual experiments in library science education with some of these techniques.[26] What is needed is an intensive effort, integrated with the new curriculum design, to develop, not isolated examples of new teaching materials, but comprehensive instructional strategies designed to complement the curriculum. Such an effort should concentrate on modular instructional activities which could be used in a variety of combinations as needed in classrooms and in individual instruction.

More significant in the long run, however, may be the new classroom attitudes generated in the wake of recent learning theories that have emphasized individual differences.[27] Theorists such as N. E. Miller, B. F. Skinner, Robert Gagné and D. P. Ausubel have also shown how to translate theory into instructional designs characterized by new concepts of the role of the learner in his own education. The learner contributes through his self-perceptions, through participation in testing to determine his entrance skills, through participation in planning the learning experiences, through his independent, rather than traditionally dependent, attitude toward learning, and through self-evaluation.

Concomitant with the new role for the learner is a new role for the teacher. Instead of being cast as the possessor of a body of knowledge, including all the answers to soon-to-be-asked questions, the teacher becomes the designer of instructional strategies by which the learner is led to find his own answers. Instead of being cast as the authority in the limited sphere of the classroom, the teacher becomes the facilitator in the unlimited sphere of shared learning. As facilitator, the teacher sets the climate for the group experience, clarifies the purposes of individuals and of the group, and makes available a wide range of learning resources, including himself as a resource.[28] Relevance, freedom and learning result. "Relevance," as Jerome Bruner puts it, "depends upon what you know that permits you to move toward goals you care about."[29] The desire to provide students with the freedom to thus move on the basis of personal motivation is the heart of the new attitude in classrooms from kindergarten to graduate school. It is long overdue in library science classrooms.

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THE DESIGN OF THE CURRICULUM
FOR THE THIRD ERA
OF EDUCATION FOR LIBRARIANSHIP

Formal education for librarianship, as expressed in terms of North American library schools and their professional contributions, is now eighty-three years old; and in that period of their history the schools have gone through three distinct phases. The first was very much that of the training class. It lasted for some forty years, that is until 1927 or thereabouts when, under the influence of the Williamson report, a general change took place in undergraduate methods of instruction. Accordingly the quarter century or so of the Bachelor of Library Science represents the second era. Following World War II American library schools abandoned the undergraduate course of study in favor of a graduate program, rather nominally in a number important respects.

We are now functioning in the third era even though the graduate character of our work may still leave a great deal to be desired in all too many ways. But the third era, like the first, exists at a time when radical changes are taking place in our administrative thinking and in our technology. The change in administrative thinking is being forced on our libraries by the onset of problems of a dimension never before faced: the daily number of readers, population shifts and growth, the literature explosion, as well as the vast quantity of materials added to our resources and circulated to readers. The change in technology comes about in a timely way; timely, that is, in relation to the mass methods which we must from now on exploit, because in the computer and other pieces of equipment there are devices which can revolutionize our methods if we learn how to master them in terms of the extremely difficult intellectual problems which must be solved before they can really do what we must have them do.

This paper, then, is primarily concerned with the impact on the library school curriculum of these two powerful thrusts. It suggests some of the new ways of thinking that are necessary if our schools, in this period of challenge and opportunity in the library world, are to rise to the occasion and to make contributions to support the library movement of the last part of the twentieth century.

THE TRANSITION TO THE THIRD ERA CURRICULUM

The characteristic of the course of studies in library schools which today calls for the most investigation and review is conservatism, in fact, extreme conservatism. It is a characteristic which has grown more and more pronounced in the last half century; and unless measures are taken to counteract it, undoubtedly it will continue to have a numbing effect on education for librarianship. Until recently it did not do too much harm to the profession, but it will in the decades ahead as the conduct of library affairs becomes more arduous and more complex. Thus, the first task in designing a curriculum is to rid it of as many elements of conservatism as possible.

One might argue that there was no possible room for conservatism in the earliest schools simply because of their newness. But that argument would not hold water since what starts out nowadays as a fine progressive school, within a year or two of its foundation (as a rule), becomes as conservative as though it had been in existence for many years. For some reason or other our schools, after careful faculty planning, make great forward strides; but then they steadily regress as though they were defying, and yet really waiting for, another forward impulse.

So the reason why the first library schools were not hotbeds of conservatism must be looked for elsewhere than in their newness. The fact that they were naturally progressive came about because they constituted an intrinsic part of the revolutionary movement which swept across North American libraries at the end of the nineteenth century and the beginning of the twentieth. The schools themselves contributed in important ways to that movement. They laid the foundations for a true profession of librarianship, and they widened its scope when they admitted women as well as men to the upsurging profession. They promoted and advanced the ideals for which the new movement stood: open access, the dictionary card catalog, subject cataloging, and an organized reference collection and services, among others. That is, the schools had a sense of purpose; they stood for something they believed in intensely; they created enthusiasm for the ideals for which they stood. To further their ends, those associated with the schools pioneered in producing a number of significant works, not the least of them being the guide to reference books whose first edition appeared in 1901 as the contribution of a Drexel library school faculty member.

Certainly by the time of the Williamson report conservatism had quite generally become firmly established. This state of affairs can be observed from the very fact that Williamson was able to give categorically the usual library school curriculum of the day.[1] The courses are listed in descending order according to the number of classroom hours of instruction a year. They were:

Cataloging	60	Trade bibliography	10
Book selection	50	Binding and repair	10
Reference work	48	Printing and publishing	8
Classification	34	Order work	7
Administration	32	— School libraries	5
— Children's work	18	Library buildings	5
Current events	15	Filing	4
Public documents	14	Community relations	4
Subject headings	14	Shelf work	4
Subject bibliography	13	Languages	4
History of libraries	12	Accessioning	3
Fiction	12	Indexing	2
Lending systems	11	Inventory	1

Apart from computer studies, there is very little in the usual library school curriculum today that was not covered to some extent or another by these twenty-six topics. There have been major shifts in emphasis as can be seen from the fact that no schools in Canada or the United States today devote a good fourth of their class time to descriptive and subject cataloging, whereas Williamson could report 108 hours for that topic out of a total of 400. But apart from that, there is many a library school dean who year by year goes through the catalogs of other schools looking hopefully for topics which others have introduced, only to end the search with the feeling that apart from variations in the names of courses and in course descriptions, everyone is doing very much the same thing when it comes to substantive coverage. There is a great deal that is fine in this situation, so much so that it can be stated that library schools are conscientious in seeing that students receive the basic preparation they ought to have; it is stimulating to find that the earliest schools too covered the groundwork systematically, even if it was in a way which we would not want to follow at the present time.

One reason why the conservatism which developed in the later years of the first library schools became embedded in the bachelor's programs was that a number of faculty members carried the tradition from the first era into the second. The Columbia library school, for example, took staff members from both the Albany and the New York Public Library schools. It would have been surprising if these people had not brought with them the essentials of the work they had been carrying out successfully, even though they responded to a considerable extent to the leadership of Williamson and made many adjustments out of loyalty to him. In the third era of education for librarianship, in the transition from the B.L.S. to the M.L.S., the staff carry-over was very great, almost total. Quite naturally then bachelor's studies and methods were almost inevitably transmitted to far too great an extent, even when careful faculty review of the

curriculum had preceded the change. Substantively there was little, if any, advance. Yet there was a general desire for it as can be gathered from the interested and concerned saying that prevailed in the profession at large for nearly a generation—that the library schools were in a period of transition from which they could confidently be expected to pull out one day.

To some extent, and quite justifiably, regard for one's former teachers has been a factor in the conservatism. In the mid-1930s, when a new school was established in Los Angeles by a graduate of the Michigan library school, what was more natural for him than to follow the pattern he held in high regard in Ann Arbor? It would have been presumptuous not to follow very closely in the footsteps of esteemed instructors such as Bishop and Mann. Thirty years later, when Ralph Shaw established a school in Hawaii, he paid tribute to the Rutgers library school, from which he had just come, by recreating its program there. Is it not natural to teach very much as we ourselves were taught, all the more so when we, as teachers, were recruited from the field and lacked prior teaching experience? How long does it take for us to mature and to make advances beyond the work of our honored professors?

There are many other causes for the conservative approach to the curriculum, for example, job security: as long as one covers the ground faithfully, according to established patterns, there can be no criticism of the teaching job that is being done and therefore the job is secure. But a far more cogent reason is that we conscientiously give the student too much work to do with the consequence that we dull our imaginations by the heavy routine of preparing the assignments and going through the flood of paper work that ensues. We undertake the load cheerfully; we carry out the program excellently; and then we have misgivings because we know that we are no longer in the state of mind that will enable us to think about what we really ought to be doing. We are caught up in the lockstep of a system, and the system works because we ourselves make it work. Yet all the while a precious ingredient is being lost—the opportunity to think on the part of both the student and the teacher. Here then we have isolated a fundamental problem which confronts library schools: How can we clear away the routine assignments, the mass of detailed work, in order to allow ample time for investigation and reflection?

The problem of conservatism takes on a special form when it is expressed in terms of graduate versus undergraduate methods of instruction. In 1929 the Graduate Library School at the University of Chicago deliberately included the word "graduate" in its name in order to distinguish its activities from those elsewhere, even though there were contemporaneously several schools which had the M.L.S. as a second professional degree. But Chicago, by its very name, was to be concerned exclusively with graduate aspects of our substantive

field, something that no other school was able to say. In the past twenty-five years an appreciable number of library schools have included the word in their designation as though the word alone had some power to lift undergraduate studies onto a higher level, or perhaps in the hope that the day would come when the faculty would find a way to make the entire academic program truly graduate in character. On the other hand, there are those who deny that our work has anything to do with undergraduate or graduate standing, even though Williamson made a classic case for a shift upwards to undergraduate standards. It is true that we do not need to add the word ''graduate'' to the name of our school in order to achieve our objectives. But no one can deny that there are elements of our library school curriculum which are high school or undergraduate in character, which therefore should not receive graduate credit.

The latest course work of this below graduate-level kind is in the field of computer science. We clearly have no business giving graduate credit to an introductory course in computer work, and more particularly in the fundamentals of programming, when high school students readily acquire that knowledge and skill; and when we look forward to the day in which all of our degree candidates will have had their basic training in computer work in their high school days so that we can build on the knowledge gained in the secondary school and apply it to our special problem field. In a few library schools an attempt is made to cover elementary aspects of computer and other studies in sessions which precede the regular program and which carry no academic credit. In many instances some work experience in a library is listed in the catalog as a ·desideratum even though that experience may have been extremely narrow and routine; but it is desired presumably because it may have inculcated some of the elementary knowledge that can hopefully ease the problem of what should or should not be offered for credit.

Of somewhat greater importance for us to come to grips with is the fact that library schools are generally held in low estate in universities, less so in colleges. We know that Abraham Flexner's criticisms in his *Universities: American, English, German* contained too much truth for comfort. The chairman of the committee which led to the creation of the new school at the University of Western Ontario made this devastating comment: ''If you get books for the University Library, everyone will eat out of your hands; but if you set up the finest library school, nobody will pay any attention.'' In his mind's eye he thought of the routine of handling books over the counter as the role of the librarian; he had no concept of what the professional librarian can contribute to the academic program of a university through his creative activities. So we do have to be concerned about the standing of our schools in the university as a whole. We should be respected as the old established disciplines are, and

there is no reason in the world why our studies should not command just as much respect. Some of the most difficult intellectual problems to be found anywhere lie in our field of knowledge; and every other discipline depends to a profound extent on our ability to deal with situations which become increasingly complex, which call for insightful knowledge of a higher and higher order.

The factor which makes the problem of discerning what is graduate in character, what is undergraduate, and what is high school, is that nowadays there is a pronounced trend for matters which were formerly at a higher level to be covered at a lower level. Matrix algebra, for example, which once was an advanced topic in mathematics, is now taught successfully to undergraduates and even to students in good high schools. Quite properly a topic such as American history is taught to high school, undergraduate, and graduate students; evidently it is not the topic which counts so much at any of the three stages. Is it not rather the degree of maturity which can be anticipated at each level? Characteristically, for example, the high school student will take most of his American history from secondary sources although increasingly he is learning how to use and manipulate simpler primary resources such as the speeches of political leaders of the day. The contemporary undergraduate student, relying less on textbooks than formerly, finds himself in a position to do first-class work, especially in honors programs, by going to primary historical sources more than to the writings of historians. As a consequence of the competence of really good undergraduates to work with primary sources, there is the feeling at Harvard University that the best honors undergraduates do better work than the typical master's student. But quite generally it is at the graduate level, and more particularly in doctoral studies, that the full play of the mature ability to handle resources of all kinds comes to the fore.

Since librarians are constantly concerned with the activities of scholars and junior scholars, they should in their professional preparation be introduced forthwith to scholarly methods and apparatus. Without a doubt they should gain considerable insight into the ways of the scholar and the researcher in the course of their first professional degree program. All librarians are, in one way or another, to a greater or lesser degree, constantly concerned with the rudiments to the full range of scholarship; gathering, sifting, and organizing data to serve known purposes or to create new knowledge, all of this hopefully in a completely dependable, authoritative, and exhaustive manner to the extent that circumstances dictate. When we say such things, we are beginning to come to the heart of the matter: the maturity of the methods and the substances are what really should and must count in education for librarianship, regardless of whether

we are preparing a public, school, special, or university librarian. We can properly call this ideal graduate study.

When matrix algebra was mentioned, it was to illustrate a trend in contemporary education. There are other trends of various kinds which are of great importance to us, yet which tend to be obscured by the conservative approach to our substantive field. A very far-reaching one is that we are entering squarely an age of mass use: we handle large numbers of readers a day, and large quantities of material. In a week we can cater to more readers than would have come through a library's doors in a year a century ago. In a year we can process a hundred thousand to a quarter of a million volumes, more items than there were in all but a few libraries a hundred years ago. Yet we are still basing our library school instruction on the situations that prevailed in the last quarter of the nineteenth century and the first quarter of the twentieth, when the medium-sized library was our ideal and when the large library was just beginning to emerge. In any university with 10,000 or more students we should expect, as a minimum, ten to twenty thousand readers a day; and we have been learning the slow and hard way how to handle these numbers successfully. In public libraries in metropolitan areas the problem of mass use is a daily phenomenon involving school students, college students, and the general public. It is accordingly of great importance for library schools to focus attention on the consequences of rapid growth. There are now university libraries which are racing through the stage of medium size and which will have a million or more volumes within a decade of their foundation. Downs and Heussman have given figures for fifty university libraries in Canada and the United States for 1968-69 which support the statements made above.[2]

Expenditures for books, periodicals, and binding	*Average*	*Median*	*High*
Library budget	2,949,293	2,529,461	8,500,000
Book budget	953,716	835,357	2,175,961
Total enrollment (FTE)	19,895	16,775	48,285
Total volumes (June 30, 1968)	1,989,188	1,456,684	7,920,387
Annual acquisitions (3-year average)	103,645	79,867	254,311
Current periodicals received	14,735	11,050	50,055
Number of microforms	339,523	349,423	924,704
Professional staff	89	73	227
Nonprofessional staff	154	119	426
Number of seats for readers	3,308	3,000	7,808
General and reserve circulation	852,458	760,779	2,517,704

Studies of growth and large size are not just the concern of the big libraries. It is important for the medium-sized library to look ahead

and to know that one day it will be facing the kind of situation which now confronts the bigger institutions. Library surveys are common when mass methods should have begun to take hold, when a medium-sized library begins to labor to keep up with its old-fashioned practice as it approaches the million-volume mark. Basically what the survey does is to point out the simplifications in method which become essential as a consequence of size, and these are matters with which students in library schools should become acquainted.

In 1966, at Stanley House on the Gaspe, there was a week-long conference attended by the librarians of the metropolitan public libraries of Canada and by the heads of a number of Canadian library schools. A major theme of the conference was the necessity for research into the ongoing problems which metropolitan public libraries must face and the importance of having library schools grapple with all aspects of those problems. Both sides agreed on the contribution the library school can make in such ways; and, although nothing has been done in the intervening years, there can be no doubt about the service which library schools can provide when they are ready to accept the challenges implied in current developments of this kind. When we assume the responsibility that goes with this type of investigation, we will be putting ourselves in the forefront of the contemporary library movement in very much the same way that the first library schools served the library causes of their day.

Allied to the questions of mass use, mass handling of materials, and size, there is the baffling problem which goes by the name of the literature explosion—or the avalanche of literature as the Germans call it. For twenty-five years top scientists have called us "inept," "incompetent," and a string of similar adjectives because we have not come to grips with the difficulties which are inherent in the literature explosion, because we have done so little toward resolving the difficulties. Vannevar Bush paved the way for this kind of criticism in his epoch-making article in the *Atlantic Monthly* in 1945.[3] To an almost total extent we have taken these upbraidings lying down. In many ways the Library of Congress has been the worst offender in this respect because it had on its staff in the 1940s a man who could have led the breakthrough for us. This was Mortimer Taube, at the time chief of the Science and Technology Project at LC. He made it abundantly clear that the conventional methods of handling the literature of science would no longer serve. On the author side he stated, quite properly, that no scientist would dream of asking for the "Massachusetts Institute of Technology. Lincoln Laboratory" report on any topic, which is the heading the Library of Congress employs; instead, he said, the common approach is for the Lincoln Laboratory report. This finding was fortunately embodied in the Lubetzky contributions to the new cataloging code and later in the 1967 code itself,

although because of inertia that clause in the 1967 code is still for the most part inoperative.

Vastly more significant than the heading revision was Taube's finding that research workers rarely ask for simple topics; almost invariably their request is for a topic in relation to another one or in relation to others. The consequence of his findings is that we can no longer rely on the simple subject control of literature as represented by LC and Sears subject headings and by the Dewey and LC classification schemes. Those simple approaches must henceforth be complemented, and eventually replaced, by systems which are not inert in the way that cards in a catalog drawer are. Our creative thinking must be put to work to enable us to develop systems which will permit readers and staff to link mechanically and at random any two or more topics, preferably by means of the computer and with limiting and other devices of various kinds. So the challenge to library schools is, first, to take a firm stand and to characterize as outmoded any precomputer scheme, and second, to carry out a series of investigations which will eventually lead to the type of control system which will adequately serve the purpose of today and tomorrow.

What has been said in the preceding paragraphs is another way of saying that we are living in a revolutionary age similar to the one that existed when the first library schools came into being. And, just as they were among the leaders of the new movement, so the library schools of today have an opportunity to be among the leaders of the revolutionary movement of our day and to share in the enthusiasm that goes with so high a sense of purpose. The methods which stood us in good stead for three-quarters of a century will no longer serve, a statement which we can make on the evidence provided by top-ranking scientists of the caliber of Vannevar Bush. And those of us who do not contribute to the development of new methods, who are content with matters as they stand, must surely be like the librarians at the end of last century and the beginning of this who saw nothing but catastrophe in changing from closed to open access.

Even if there were no great changes in prospect as the computer age takes greater and greater hold, we must be concerned with the fact that library school faculty members for too long have tended to be followers, not leaders. When we were in the field making professional contributions, we were leaders; when we began teaching and reporting what those in the field were doing, we became followers. It is true that we could be leaders in education for librarianship; we could be highly successful teachers. But in our teaching field those qualities carry no significant research component with them for the most part; and it is imperative that library science, like every other discipline in the university, carry its full research complement. Problems of the order of mass use, metropolitan public libraries, and the literature explosion can present research material for

innumerable investigations of high quality; they can increase the dignity of our teaching responsibilities to the point to which we can feel satisfied that we are doing what we ought to be, that we are doing what commands respect in the eyes of scholars and research workers.

Allied to these matters is the question of just what it is that we are trying to accomplish in our library schools. We cannot reshape our curriculum unless we know the ends which we are to serve. There are many in the field and some in library schools who believe that we should be preparing people to fill the ranks. They argue that we should leave alone the preparation of the colonels and generals; somehow or other they will graduate from the ranks like a Napoleon. Just the same there are rumblings over this do-nothing policy. Eldred Smith, for example, says that "for a number of years, in the mistaken belief that libraries require a vast herd of additional personnel, the schools have produced a large number of poorly educated graduates." He goes on to say that "the old fifty-year programs should be abandoned or drastically revised for academic librarians. Certainly, the generalist approach is no longer applicable to the education of the sophisticated specialists that research libraries require." He calls the problem "an old bugbear of library education: quality vs. quantity."[4] I do not believe that a new type of library school is required for the first professional degree to make the kind of contribution that is called for here. But I do believe that Eldred Smith is saying very much the same kind of thing that has been said above, namely that our libraries are beginning to operate in a new and revolutionary age and that our curriculum must be adjusted so that the library schools can join the ranks of the leaders in this new and exciting age. If we succeed in doing this, we will be just as successful in providing the insights for the future colonels and generals, regardless of whether they are staff or line officers, as we will be for the privates and the sergeants. We must never lose sight of this dual responsibility.

One reason for saying this is that, as the computer age comes into full swing, we may well see the disappearance of the small isolated college, public, school, and special library in its present form. The staff in small remote institutions may easily find itself called on to master the intricacies of the full range of knowledge as it becomes available over electronic networks. Accordingly the day of the unsophisticated librarian may well be coming to an end. It can very well be that we shall need to substitute the specialist, the experts who among other skills "can step into the collection-development, substantial-reference, and bibliographical-consultant positions that are now largely unfilled."[4]

A CRITIQUE OF SOME BASIC COURSES

Traditionally we have looked on administration, book selection, cataloging, and reference as the core courses in our curriculum. The four were singled out for this mark of distinction because they represent the greater part of the librarians' work day techniques. When the four have been mastered, then one can operate a library or a library function with a modicum of efficiency at any rate. Only in limited ways or with the exceptional instructor do the four in reality give insight into what it was that our predecessors had in mind when they established or developed our libraries; and somehow or other, except in library architecture, we do not seem to concern ourselves with the specialized problems encountered in starting a new library. Nor do the four courses represent the basic preparation which a librarian should have in this increasingly complex era. Actually of the eight courses discussed below, seven should be regarded as core courses, and all eight of them should be designed or redesigned to serve adequately the stage of library history in which we find ourselves in the last part of the twentieth century.

ACQUISITION

Most library schools have a course called "Book Selection" or some variation on that theme. There used to be a course in "Order Work" but that as such has disappeared and the content has been absorbed elsewhere, quite often in "Administration."

In the early days of library schools, when the library profession was in its formative stages, a course in book selection was highly desirable. It made important contributions toward an understanding of how, for the day, library resources should be developed. At least one fine book was published during the period of book selection courses, namely *Living with Books* by Helen Haines. Under the impetus of specialists in book selection, standard lists of books were prepared, especially for public and school libraries, and latterly for college and junior college libraries. Public library systems set up book selection committees which operated enthusiastically by means of reports made by staff members who read the books which were to be discussed at committee meetings.

Contemporaneously, of course, the very term "book selection" is a misnomer. Every type of library is concerned today with a wide variety of media: books, manuscripts, microcopies, pamphlets, periodicals, recordings, sheet maps and music, and a host of other forms. Be that as it may, it is truly distressing to look back over the past eighty-three years, the library school span, and to realize the inefficacy of courses in book selection because on the one hand the great library collectors have rarely been the products of such courses—Harry Lydenberg of the New York Public Library and Archibald Cary Coolidge at Harvard, for example—and on the other

hand library collectors have missed the boat on one important area after another so that today there is in the whole of North America, for instance, not even one notable collection of the works of Gandhi, the best probably being the one collected by a private individual, John Haynes Holmes, and presented by him to Harvard. It was because of the serious failure of our selection system that the Farmington Plan had to be instituted, the primary cause being that no library in the whole of North America had gathered together an extensive array of materials relating to Japan—China, yes; but Japan, no. The reason for these shortcomings is that book selection is like the blinders on a horse which make him look steadfastly in a given direction and prevent him from taking in the world at large.

Historically, too, there is the difference that even as recently as 1940 North American libraries collected almost exclusively publications in English, French, German, Italian, Latin and Greek, the Scandinavian languages, and Spanish, with a mere scattering, for the most part, of other languages. The 800's in Dewey to this day represent this restricted viewpoint: Chinese literature has a tenth of a number, 895.1, as does Russian, 891.7, just because we were not expected to collect anything much beyond translations or histories of Chinese and Russian literature. There were, of course, a few, just a few, Chinese and Russian collections in North America prior to World War II; for the most part they were not integrated with the main bookstock and they were always in the keeping of natives of China and Russia. It was even difficult for administrators to know precisely what the native-born staff was doing. So, for instance, it came as something of a shock at the Library of Congress in 1940 to discover that the Oriental Division had concentrated on Chinese publications to the virtual exclusion of Japanese and that the Slavic Division was deliberately putting all its book funds into the acquisition of pre-1918 publications to avoid the acquisition of any Soviet material. From the time of the Farmington Plan in 1942 there could be no limitation by language or country; our collecting has been and will continue to be on a global basis. Even if a library operates on the restricted plan of earlier times, publications in English appear in so very many countries that we must watch the book production of the world to catch, for example, an American work on mathematics issued in Holland or an American art book published in Switzerland.

While it is sad to look back and acknowledge how the great collections in American libraries were generally gathered—not by librarians, not by those who took courses in book selection, but by private collectors—in certain respects it is encouraging to be able to say that the situation is changing today. In college and university libraries it used to be that faculty members did most of the building up of resources. Were they to undertake the responsibility today, and to do the job as it ought to be done, they would be working full time for the

university libraries; thus there is a pronounced trend away from the professor as the individual who decides what items should be acquired. Increasingly library staff members and other subject specialists are taking over from the professors. In most cases this is desirable because of the speed needed to operate in the highly competitive book market of today and because all the skill available must be employed to build up resources by gift and exchange, two methods which faculty members seldom exploited to any extent.

What all this amounts to is that book selection, with its platitudes and limited outlook, is seriously inadequate for contemporary needs, even in the school and small public library. The librarian of the present and the future ought to be acquisitive through and through; he ought to be a bookman in the best sense of that word, namely, one who is well informed on books and book production. He must be able to compete with the very best library book collectors in the world, to hold his own regardless of whether the tactics are fair or foul.

Accordingly acquisition studies should be substituted for the outmoded book selection course. We shall then be preoccupied with giving insight into the current state of the book market, into the use of national bibliographies and other sources for systematic collecting from what is available throughout the world, into the not-in-the-trade market, into the remainder business which so often comes into play within months of the original publication date, and into gift and exchange procedures. We shall be concerned with the serious deficiencies of lists of books which are alleged to be in print even though 10,000 items will go out of print during the lifetime of this year's American *Books in Print* at the same time that even more are published which will not be listed until next year. We will examine the strengths and weaknesses of the Farmington Plan and most other blanket-order schemes. The art of making the library dollar represent two dollars rather than fifty cents must be learned. Studies of the antiquarian and secondhand booktrade around the world should be carried out. And above all, the knowledge which first-rate acquisition librarians carry in their heads should be made available to all.

In the past we have had comparatively few really first-rate acquisition librarians. Now we have need of them. Is it not a responsibility of library schools to prepare such specialists for their arduous tasks? If so, then the old-fashioned book selection course should be a thing of the past. We must move with the times; in acquisitions the times are moving very fast.

ADMINISTRATION

Margaret Mann used to give her students in the Michigan library school a superb demonstration of how, in the Armour Institute to which she went and in which she taught, a dignified bearded gentleman would demonstrate in front of the class with a broom how library

floors ought to be swept. That incident gives an inkling of how administration was taught in the first era of library schools. In the second era the broom disappeared, but in the Columbia library school syllabus for the bachelor's work in administration the topic of cleaning materials for library floors was listed for class discussion. The syllabus made the following statement: "A librarian may be at a loss unless he is conversant with many homely facts and conditions, and unless he has acquired some knowledge, for example, of roofs, furnaces, fuels, floors, and mops."[5] How far have we progressed in the third era? Is the course on administration a catch-all for odds and ends, even "homely facts and conditions," that do not fit snugly into other courses, or is it genuinely similar to courses in graduate schools of business administration in which students gain insight into the art of planning a course of action and making decisions?

Again I believe that we must move strongly away from the former pattern and come much closer to the business school type of approach. And by this I do not mean a changeover to the case method because the production of proper case studies is a really expensive undertaking. But two elements in the new approach are clear. First, we should have studies in the theory of administration and very much along the lines of Elton Mayo's investigations of team work, the sense of belonging, and so on. These studies do not have to be as extensive or as systematic as they are in a business school, but they are essential preparation for those who will work in the ranks just as they are for those who will become section or department heads or chief librarians. Second, since most librarians feel helpless when it comes to planning a new building or remodeling or rearranging an old one, we have reached the stage at which every library school student should gain insight into the design and creation of library buildings. All too many of our structures, including most multimillion-dollar buildings, are not what they could have been had there been the proper professional thinking in their planning. Excellent library buildings are something of a rarity. They come about only when there is complete teamwork between the architect and the librarian, the complete sharing of the two sets of insights. And the library consultant, substantial help that he can be, is no substitute for the architect-librarian combination. Very definitely library schools can play a part in raising the quality of the home of the library, the library building. We need not be deterred because there is very little in print on the design aspect of libraries and that most of the printed matter relates to details and norms. Colored slides of new and historical buildings afford the student an opportunity to figure out the elements of design for himself, to observe what is good and effective, and to avoid what is bad. Slides of this kind help to train the student's powers of observation in general, a skill that will find room for play in various aspects of our daily work, but above all in administrative duties.

These two matters are clear, but when it comes to the hodge podge which quite generally covers the rest of a course in administration, it is far from easy to see the daylight. It could be that there should be no further studies beyond the theory of administration and library architecture. Could we cover the rest of the ground by means of demonstrations, both good and bad, and by reading and discussing annual reports of libraries? For one thing, the library school library in itself can offer a wonderful opportunity for the demonstration of sound methods, whereas in the past it has all too often represented outmoded practice or practice dictated by lack of funds or by lack of interest on the part of a general university/library administration. It could be that we should comb what we are now covering and select a handful of topics that could be combined with the studies in the theory of administration. The solution to the problem, whatever it may be, will be difficult to contrive. Just the same we must "front that difficulty," as Carlyle said when he demanded a catalog at the British Museum, and stop lingering in the second era of library school history.[6]

CATALOGING

Few parts of the curriculum have been so ruggedly conservative as the course in cataloging, which in many of its aspects still represents the thinking of the first era of our schools. In rethinking the course in cataloging we should begin with a statement of objectives. Eighty years ago, in the first era of library school history, there were relatively few open-access libraries anywhere. Naturally then descriptive cataloging was of greater practical value than subject cataloging which was just in its infancy. In present-day North America over 99 percent of all libraries are open access; yet the emphasis in our courses on cataloging still continues to be on descriptive cataloging even though the catalog is of secondary importance in an open-access library. The problem is compounded because the Library of Congress follows closed-access principles of cataloging. When we are teaching Library of Congress cataloging we should be punctilious in pointing out to the students that its policies and practices differ in important respects from those which we ought to be following in open-access collections. We could repair some of the damage if on every appropriate occasion we made the distinction abundantly clear to our students; but how many of us, for instance, point out that the technical heading that we choose, very often for no other reason than that it is on an LC card, may make it difficult to find the book in the course of direct consultation of the shelves? It is fine, for example, to have a rule which states that an abridgment goes under the same heading as the original; but when it comes to putting the *Shorter Oxford Dictionary* under Murray and shelving it under his name—just because he was editor of the *Oxford English Dictionary* and so his

name, according to the rule, must constitute the heading for an abridgment that does not even mention his name—then we are guilty of making it difficult for the work to be found when we go to the shelves directly, a matter which is of serious import in an open-access library. We are fond of quoting Cutter's statement about the convenience of the reader, but on many occasions we seem to overlook his convenience when it comes to the open shelves.

Accordingly in overhauling studies in cataloging, a first requirement is to give the arrangement of material on the shelves, that is the classification, the priority in treatment and emphasis over descriptive cataloging. In an open-access library most of us, readers and staff alike, go as a rule to the shelves in the first instance and have recourse to the catalog only when we do not find on the shelves what we are looking for. In a closed-access library we have no option in the matter; except for the books on the reference shelves we simply must consult the catalog for all our needs. And so for the great majority of our libraries, of all kinds and sizes, the most valuable part of a cataloging course should relate to the classification scheme, that is, to the truly effective organization and display of the bookstock for reader and staff use.

When the New York Public Library began to think about the new reference and circulation library to be opened in the fall of 1970 in the Arnold Constable Building almost opposite the reference department, the interesting idea was advanced by John Cory that no catalog would really be necessary because completeness was the goal for the collection, at least for current output. The point of theory involved can shed much light on what is being discussed. The idea was an excellent one, what it required to make it a success was a classification scheme which almost unerringly would make it possible for readers and staff members to know where to look on the shelves or in the shelflist for any given item. Unfortunately the ideal was not pursued. The new library will have a conventional catalog and the collection will be classified by Dewey; between Dewey and the ideal there is an immense gulf.

In classification as it is generally taught, the student attempts to answer this question: Where does this item fit in the system of knowledge? That type of approach succeeds all too often in burying an item: putting a work on symbolic logic with mathematics in Dewey or LC instead of in philosophy when it is for the use of students and faculty in the philosophy department, putting a work on constitutional history with law or political science when in a school library it is intended for history courses, and so on. Fundamentally we are organizing our library resources for use, are we not? If so, the question should be: Where can I class this item to make it readily accessible on the shelves of my particular type and size of institution? Or, where on the shelves is the reader or staff member most

likely to look for the item? When a working philosophy of this kind is followed over the years, the works on the shelves become a resource that can be consulted readily and conveniently, and without the necessity of looking in two or more places for items on one and the same subject as so frequently is the case today. The problem is not at all serious when we are required in the first instance to work from the catalog as we must do in closed-access systems. We become inured to finding our books in a wide variety of classes. In fact, we would be surprised if ever we found them consolidated, and a study under almost any heading in the Library of Congress book catalog for subjects will show how widespread the dispersal is, both for LC and for Dewey classification numbers. In an open-access library though, have we any business giving readers and staff members the run-around to find like materials?

It is equally important for us as teachers to be making clear today the innate deficiencies of all precomputer classification schemes. The future surely cannot lie with them; and yet we do not point out to our students the folly of reclassifying from one precomputer scheme to another, as quite a number of libraries are doing at the very time when they should be looking forward to the computer scheme that will in the not-too-distant future be serving them both for the arrangement of books on the shelves and for information retrieval. A straw in the wind is the Library of Congress practice of utilizing simple Dewey numbers for the machine manipulation of the entries in the acquisition edition of *New Serial Titles* for the simple reason that such numbers are more readily machine-usable than LC classification numbers are. We should be pointing out too the harm that MARC is doing on the subject side, an area which the computer can be made to serve in a supreme way, by suggesting that all we need for machine control is a single LC or Dewey classification number or else the LC subject headings which were not devised for computer applications, which have not even benefited by Mortimer Taube's penetrating criticisms, and which are quite generally so ambiguous that they succeed in generating a vast quantity of "noise."

The paucity and deficiencies in the literature on subject cataloging have undoubtedly been a factor in the subordination of classification studies to descriptive cataloging, a topic which has been extensively written up so that we can be sure of what we are saying when we discuss that phase of the cataloging course. Most of the knowledge about classification, certainly about the extremely important aspects of the policies and practices which are followed in applying a system, is carried in the heads of those who are working in the field or is determined by daily searches of the subject cards or the shelflist to determine what the unrecorded practice has been. This is the way in which we operate in libraries; why is it not the way we use in our

teaching? After all we can use the LC book subject catalog as the tool for the students to consult in seeking their precedents.

Such writings as there are on classification systems tend to be descriptive; they tend to conceal far more than they disclose. Do any of them, for instance, tell one what to do in Dewey for the law or statistics of a subject when there is no form number for these important aspects? Do they tell one that the subject headings must be made to eke out the deficiencies of the classification schemes? And what of the poor reader or staff member who wants to find the law or the statistics on a subject through direct consultation of the shelves? Does any writing on the LC classification say how that library arranges its rare books, what to do when one finds a priority 4 number on the card in place of the regular classification number, or that the base of the system which once was praised as being so broad has become so narrow in numerous classes that a bottleneck has developed in the assigning of the book numbers?

Speaking of book numbers, why do our library schools have students work with Cutter tables when they assign book numbers? That is not the way we operate on the job. There we devise the numbers from the evidence we find in the shelflist. I have never worked in a catalog department which used Cutter tables; maybe they did not even own a copy of them. Only the shelflist can say whether there are one or two or a thousand or more books on a subject; and quantity determines the length and complexity of any book number. Only the shelflist can disclose conveniently that there are other editions or works of an author in the same class so that title letters and other adjustments become necessary. And yet, quite distressingly, there are libraries which consistently employ a three-figure Cutter number in all classes, regardless of the number of titles in a class, just because three-figure Cutter numbers were the order of the day in their library school year. In teaching the problem arises quite naturally because library schools lack general shelflists which students can consult as they assign book numbers in their practice work; but is it not wooden to suggest a method which few libraries follow?

Similar comments can be made on the subject headings which in their day were a notable contribution to the reader and staff use of our bookstock. However, the warning signals were already flying in the 1940s when Taube was engaged in rethinking the subject control of scientific literature. From that time on it has been clear that the old-fashioned subject heading serves all too limited a purpose, that it must be complemented by a relational system that will enable us, among other things, to link any two or more headings by computer or other means, and that the terms must be as unambiguous and precise as possible—indeed that they may have to be given up in favor of a classified approach since that gives evidence of being a superior system. For our present thinking the introduction to the list of headings

prepared under Taube's direction for the Science and Technology Project at the Library of Congress[7] is of even greater significance for the thinking of our students than is the introduction to Sears's or Haykin's book on subject headings. The Taube list is for us, as it was to him, a transition piece of work, but it points in the direction in which we must go in the years ahead. In how many of our schools, though, do the students study it and its theory? When it is consulted, how much time is devoted to it by comparison with the time given to Sears which, after all, from a current standpoint, is a baby list? Am I alone among library school instructors in having a most uneasy feeling every time a student is required to work with Sears, even with the LC list of subject headings? Both of them symbolize the delightfully simple days of the past, when no one thought of calling us inept, when no one could think it was a complete waste of time to call for a subject card "1. American literature—Hist. & crit." or "1. Philosophy." I trust that I am not alone in wanting to get our students preoccupied with the problems of 1) quantity: the existence in a catalog of many thousands of cards on a single subject and 2) complexity: the only solution to which will be found in a system which permits the manipulation of entries so that one heading can be related to another, or to others, quickly and conveniently. There is genuine intellectual content in occupying the time of students with problems of this magnitude and difficulty, problems which will be harder to solve if we delay until the literature explosion has made its effects even more felt.

Turning to descriptive cataloging, I cannot recall when as a practicing cataloger I last had occasion to consult the catalog code on any point. Why do we emphasize and overemphasize cataloging codes? On the job, when we have a case in point, we do not turn to the code for a solution. Instead we check our catalog to see what our particular library has already done in similar situations. We must operate within the unity of our catalogs; even though this is the way in which so many ad hoc decisions have been made at the Library of Congress and elsewhere, for example for the so-called anonymous classics, still this is the manner in which we proceed in work situations, and this is the way people are apt to act in future years. That is, on the job we must of necessity follow the style and precedents which are found in our individual catalogs. This does not imply any rigidity because very sensibly, particularly of late, we have been ready to insert catalog cards made according to a variety of rules and styles, and notably, of course, when we Xerox our catalog cards.

I believe it is more important to prepare future catalogers with this kind of a working philosophy than it is to try to indicate to them that there is anything whatsoever that even approximates a national standard of cataloging. Who would have the temerity to define such a standard? For most of the time since the Library of Congress began

its modern cataloging in 1898 it has followed a wide variety of styles and practices. Seventy-two years ago it began with its own version of a half card. The style of the LC card as we know it today went through a process of evolution. For the first forty or more years the various cataloging sections in the Library of Congress followed their own rulings, not, to quite an extent, those of the library as a whole. We had evidence of this diversity when cooperative cataloging was organized in 1931. In the ensuing years catalogers from around the country often wrote to the cooperative cataloging section for the clarification of differing practices as found on LC cards. Very commonly the response was a statement of what the cooperative cataloging section called "the preferred policy," by which was meant that the section preferred the particular ruling as against one or more rulings followed elsewhere in the cataloging division. Nowadays LC is following the practices of many of the national bibliographies of the world as it does its Title II cataloging. On reflection we cannot find fault with these divergent practices and policies. As a matter of fact, there is a saying in the profession which states that the only consistent catalog would be one made by a single cataloger in one day— tomorrow he might change his mind.

The enormous advantage we enjoy today in teaching cataloging is the availability of numerous book catalogs produced in the past two decades which show what individual libraries are actually doing and how widespread is experimentation. The advantage is so great that we can give up teaching from codes and follow inductive methods by means of which students discover from the catalogs what the rules are and the extent to which any ruling is followed or varied. After having taught cataloging by both methods I can say that it is much sounder in theory and more lasting in its effect to have students explore the descriptive and subject details in book catalogs than it is to teach in our long-standing ways. Students can learn about forms of name to great advantage when they examine practices in book catalogs, whereas it is quite misleading when we give them the statement in the code and create the impression that there is only one form of name to be preferred or one degree of fullness for a personal or corporate name. When they are taught by the inductive method, students are already well along the way toward being prepared for the individualistic styles and practices which many good libraries follow. They are then in a position to appreciate an augmented · heading such as "Plato. Republic. English. Jowett. 1899" which simplifies the filing of cards and at the same time makes it easier to consult a very large file such as the one in the New York Public Library from which the augmented heading was taken. They can begin to grasp the value of the file in the Harvard Library which uses the date of publication but no subheading under "Catholic Church," a practice which makes an otherwise extremely difficult file comparatively easy to consult.

As if all this were not enough, it is necessary to continue and to say that our courses disclose an almost complete failure to cover cataloging methods. How many of us go into topics such as preliminary cataloging, searching, and sorting? And this at a time when valuable class time is for the most part wasted on work with authority cards which are used in not even 1 percent of our libraries and which since 1949, with the onset of no-conflict cataloging, are at least 90 percent worthless. It really is very serious that our graduates go out into the field without any idea of the method they should follow when they sit down to catalog. Most students somehow develop a hazy idea that they should take a single item and complete the cataloging on it before taking up another one. Naturally cataloging production is low when that system, or lack of system, is followed on the job. Students should learn the advantages of first arranging books alphabetically by author to enable systematic work to be done on the totality. They should learn to do all the preliminary investigations for a morning's or an afternoon's work before they begin to do the actual cataloging. Only when all the preliminaries have been checked and every point has been determined should the synthetic process start, whether this be original cataloging or the editing of preliminary cataloging.

All teachers of cataloging are aware of the unsatiated demand in the profession for head catalogers and chiefs of processing departments. There is no reason why we should not provide the kind of preparation that is required for those who will later assume such responsibilities. To a high degree we must attribute the neglect to our preoccupation with the rules and details of descriptive cataloging to the virtual exclusion of these and other pressing matters. The fact that there is very little in print on these matters is no excuse. In universities we are working constantly on the frontiers of knowledge where ideas and information must be generated. The insights which a head cataloger or a chief of technical services must have today are partly on the frontiers of knowledge, especially as they are faced with problems of a dimension not dreamed of before; but to quite an extent they represent everyday situations, knowledge of which can be derived from those who fill the positions of head cataloger and chief of the processing department contemporaneously. I do not believe that more time is required for the cataloging course so it can absorb the wider responsibilities. Rather it is a case of reducing or sloughing off much of what has concerned us in the past.

COMPUTER STUDIES

At the outset it should be reiterated that we should not offer for credit work in the elements of computer operations. They belong at the high school level and quite definitely graduate credit should not be given for studies of that order. If for a number of years to come we

must still teach the rudiments to some or all of our students, then it should be on a noncredit basis.

Next it should be said that, as such, individual courses in computer studies are nothing more than a stopgap in library schools. They should not exist as discrete units in our curriculum. This desideratum has nothing to do with the fact that computer studies must and will bulk larger and larger in our total course offerings. What it means is that the work should be redistributed throughout the curriculum so that computer topics fit in naturally whenever and wherever they belong. For example, the computer in relation to acquisition belongs with acquisition studies. When this day comes, we will no longer have two instructors speaking at variance on what is essentially a unitary subject as so often happens today when there is no opportunity for the first of the instructors to contribute to the later discussion. There will have to be much retooling before most instructors can absorb computer studies in their courses to the extent that they can direct the discussion adequately. Nevertheless the complete integration of computer and noncomputer aspects of all topics is the goal to which we must all look forward.

Computer studies can go far toward providing the research component which library schools have generally lacked for so long. No one anywhere has the answers to library computer needs. Systems have been set up empirically so that they operate up to a certain point and are not likely to go further until basic research studies are made. Where better for those studies to be made that in the framework of our curriculum? We can illustrate what is meant by the following: A recent survey indicated that some three hundred libraries in North America are employing the computer as the device for checking in the current issues of serial publications. The most common pattern was set by the University of California at San Diego and involves arrival cards which leave much to be desired and restrict the system to no more than 20,000 entries. Some people talk of the necessity of developing four distinct systems according to the number of serials which there are in a small, medium-sized, large, or very large collection, whereas surely a single system would suffice if only we could work out the theoretical foundations. At the same time there are countless libraries which are awaiting the day when a satisfactory computer system for the control of serial receipts will appear. Accordingly we must not be content with having the students examine the San Diego pattern or any variation on it. Over and above this we must carry library school studies to the point at which we will be able to devise satisfactory programs based on the evidence created in our research investigations.

HISTORY OF BOOKS AND LIBRARIES

I remember from my own library school days that the course began with clay tablets, required us to identify examples of medieval illuminated manuscripts in the final examination, and went on to the American Indian quipu; but it never did get down to the nineteenth and twentieth centuries which might have had some real value for us in the course of our professional careers. In fifty years of professional activity I have never had anything to do with clay tablets, the identification of medieval manuscripts, or the quipu, although I have collected the publications of the Merrymount Press advantageously. What concerns me is not who was the librarian of the Bibliothéque Nationale in Paris in the year 1700, but what took place in the British Museum in the 1820s when there came the first insistent demands for the means by which readers could help themselves instead of having to operate through the aid of the librarian as a living catalog. Therein lies the foundation of our present library organization, and it is the living past with which we should be concerned in our historical studies, not facts for the sake of facts. Quite naturally then the folio volumes of the British Museum inquiries which recount the story of those days, and which contain the significant contributions of Panizzi and Carlyle in particular, have always constituted my favorite professional reading.[8] Fortunately the Irish Universities Press has brought one of the inquiries back into print, and hopefully the other will be reproduced before too long. These volumes are a gold mine for our students because in them they will find the historical reasons for much that we do today, in them they will find the origins of the library movement in which we are caught up today.

I believe that in our curriculum the historical studies should be divided into two. First should come old world studies since they provide the base on which we built the new world. But second should come new world studies to provide insight into the practical turn which knowledge took in the American colonies and elsewhere and to show what we have been able to achieve in relation to the old world. Quite disturbingly we can learn one thing, and that is that books and libraries to an enormous extent are the prerogative of the northern hemisphere and not of the southern. Louis Wright's *Culture on the Moving Frontier*, the work of the former head of the Folger Library, represents the kind of study which we should be undertaking for the new world. Studies of that kind should be complemented by the interactions of old world and new world cultures, and quite especially, of course, by the far-reaching influence of the University of Göttingen Library, for example, on the Astor and the Boston Public Libraries, and negatively on the Harvard Library.

Library science is one of the few professions which lacks a formulated philosophy. There are writings on the subject, but they do not get us very far. It will take considerable thought and depth of

understanding before a philosophy of librarianship can be fully developed. In the meantime the best philosophy we can provide for our students is to be found in the elements of the history of books and libraries which have an important bearing on present-day thought and activity.

LANGUAGES FOR LIBRARIANS

Most library schools have a language entrance requirement which may or may not mean anything of professional value. That requirement served its purpose prior to World War II, but with global collecting in the postwar period it is no longer the answer to the problem. By comparison with graduates of library schools on the continent of Europe, North American students are ill equipped to do their work, for example, to gather information from major reference tools in languages other than English.

We should, therefore, in our curriculum be teaching the art of reading, not individual languages, but families of languages. Librarians belong to one of the professions to which a reading knowledge of languages is in general a prime need, and the need will become greater in the days of the electronic networks when even school librarians or the librarians of small rural public libraries will be able to tap the service to the enormous advantage of their institutions or communities, that is, provided they have the competence to do so. There is a vast published literature on the teaching of spoken languages. Very little has been done with the teaching of a reading knowledge of languages. This is an area, then, in which our profession can undertake pioneer investigations and make important contributions.

REFERENCE WORK

The pattern for teaching reference work was established in the first library schools, and we are still operating on the basis of the methods of those days. Kroeger, the predecessor to Mudge and Winchell, appeared in 1901, and the three of them have dictated the pattern of reference studies from that day to this. As a consequence we have never approached the reference collection directly. Instead the objective has been obscured because we have set the students to search for a piece of information, usually pointless, which can be derived as a rule from one work only and which therefore becomes known to the student in this indirect manner. Another weakness in the approach is that the students tend to form teams and to apportion the questions to members of the team who then share the answers one with another. It is common for students to ask their fellows if anyone has found the answer to a particularly out-of-the-way question. The same procedure applies in other courses too, but nowhere is it as rampant as with reference assignments.

Cannot better ways of preparing reference librarians for their professional life be devised in the third era of library school education? Undoubtedly they can. For one thing, Winchell is always behind the times, is clumsy to consult as the supplements multiply, is at best an imperfect record when compared with Malclès, Totok, and others, and is prepared in a university library and yet employed by many students who will never work in a university library. One answer to the problem is that we should eliminate from the daily work of our students every reading list or syllabus and instead make the students seek out their own sources of information; in this way they will learn firsthand much of the art of the reference librarian by the process of selecting an item because it is authoritative while rejecting another because it is not. Until they receive such continued training, the citations and quotations made by library school students will continue to be poor to a marked extent; all too often a student will quote as an authority a totally unreliable author or will fail to reflect on the quotation to test its validity. If, then, we require our students to seek their own sources of information throughout their library school days, and teach them how to go first to primary sources and to be doubtful of secondary sources until they can in one way or another authenticate the information, we shall to an appreciable extent be removing the need to teach this aspect of reference work, just as at the same time we shall be making reference librarians out of our students from their very first assignment.

I do not believe in the efficacy of any survey course in the literature of a field even though we have in some schools courses in what is considered to be the literature of the social sciences or the literature of science. The fields are too enormous to be treated in that way; they are fast-moving fields of knowledge and the best we can do in such courses is list a selection from the noncurrent publications of a limited kind. No one can benefit from this type of an approach; an occasional item here and there along the way can be discovered and remembered, but certainly not the vast array of items even in the major languages of the world. And a course in reference books tends to be essentially another survey course, this time a survey of a listing of reference books, but by no means a complete or a current listing. What more can this method accomplish?

Once more the way we teach is not the way we operate on the job. At a reference desk there are occasional consultations of Winchell, it is true, particularly when we have an annotated and interleaved edition that is kept up-to-date. But our work pattern is with the card catalog, with the quick reference books and the vertical file close to the reference desk, with the reference books in the narrow sense (that is, the R collection which is invariably more up-to-date than Winchell) and finally with the total resources of the library which constitute the reference collection in the broad sense.

Beyond that aspect of reference work, much of the success of the reference librarian consists in the ability to handle readers not only in person but also on the telephone. There is the sizing-up of a person to determine the level or degree of information he should have. There is the rapid attempt to work out how long it will take to help a person. There is the art of engaging a person in conversation while one strives to think how his problem is to be tackled, and so on. These are the everyday realities of work at a reference desk, so these are the arts which we should be inculcating vastly more than acquainting the students with numbers of reference books which he may never consult during the course of his professional career.

Actually what would help our teaching tremendously would be video tapes which show outstanding reference librarians in action. Students would then be able to observe how readers are handled expertly and to follow the varied situations which the reference librarian experiences daily. The video tapes would not be easy to make because it is difficult to tell in good time when a situation that is worth studying will arise. From the comments which the reference librarians would add, the students would become aware of the ways in which reference patterns differ from one institution to another, at times quite markedly because one city specializes in insurance, another in manufacturing of one kind or another, the third is a college town, and so on. They would learn too that fashions in reference questions change from year to year, and here we must record it as a teaching loss that the New York Public Library no longer publishes annual reports of a kind that it once did when there was a record of the annual changes in reference patterns, not only in general, but in the subject divisions as well.

MASTER'S SEMINARS

When Williamson was dean of the Columbia library school, he gave a second-term seminar for the twelve students who ranked highest at the end of the first term. Those twelve students were envied by their colleagues and rightly so. The seminar experience is a most desirable one which should, however, be available to all students. A curriculum carefully plans for an extended series of analyses of our professional activities. Therefore, if we are to round the curriculum out, there must be at the end a device for drawing the threads together and for providing a picture of the library as a whole before the graduate begins to work in some area of a library in which he may have difficulty in trying to create a picture of the institution as a whole. So here is the theoretical foundation for a series of master's seminars in each of which, from term to term, there can be the possibility of uniting all the scattered threads with which a student is concerned.

In the first term the master's seminar might take the form of an unstructured program in which the beginners raise their problems and express their doubts. Thereby there might be a desirable alternative to the orientation plan which many schools follow to some degree or another. In the second term it might be more of a reading course in which students report on the professional reading which they have done on their own, particularly from new periodicals and monographs. But in the final term the real master's seminar would attempt to put the finishing touches on each student's professional education. In anticipation of this seminar every student should be asked to record in writing the principles which he can recall from the major courses he has taken. Much remedial work can be done on the basis of that assignment; many wrong impressions, some of them flagrantly wrong, can be corrected in good time; and ideas for the improvement of the school's instructional program can begin to emerge.

It is astonishing to find how few principles the students think that they have absorbed in the course of their studies. Some even deny that they have learned any principles whatsoever or they question whether, in the light of what they have studied, there is any difference in our field between a fact and a principle. It takes a wise instructor to deal with the situations that develop in the master's seminar; but the problems are real, and we should take advantage of the rich opportunity that exists to put the finishing touches on a student's professional preparation so that he will be well prepared for his first position and so that he will have some comprehension of what may lie ahead for him as he works his way up the administrative ladder.

One aspect of the concluding master's seminar is so important that it could well be made into a course in its own right. That is the topic of the library of the future. Most of our studies look back or discuss the present; we need to go out of our way to encourage students to think along sound lines about what the profession will develop into during their professional career. They should study earlier projections to see how sound they were, and with that salutory experience they should move cautiously in dealing with projections such as the oft-heard one about there being no more books in libraries by the end of the century. They need the guidance of the soundest training we can give them for their work which will of necessity be in the library of the future: the problems that go with its size and complexity; the relative ease with which a vast resource can be consulted if we can devise and apply the right methods; administrative difficulties and costs, including the fact that an administrator must be better prepared than ever before because a mistake in the future can have far more serious consequences than a mistake in the past could; and so on.

Clearly there is much to be done in rethinking and then redesigning the library school curriculum in this third era of education for librarianship. And when the curriculum has been redesigned, it should not be thought that the task has been done for all time. The redesigning must be a continuous undertaking, a process of constant review and development. Like the three-year or five-year economic plans in various parts of the world, we should think very much in terms of a curriculum which undergoes periodic reexamination and reformulation. Beyond that, there are three overriding responsibilities which must be accepted.

First, if we are to make our curriculum effective, we must do everything within our power to remove the structure from the individual courses. I am sure from actual experience that the best results come from almost completely unstructured courses which yet somehow manage in one way or another to cover the groundwork systematically. Should we ever succeed in effectively combining the lack of structure with systematic coverage we will have developed the finest possible learning situation for our students who, after all, are our future colleagues. We should be making studies of the ways in which we can achieve this objective.

Second, we must make a tremendous effort to remove from the curriculum the enormous amount of detail that we demand of the students. Is it not better to find one's way through the forest rather than tag every single tree in it? I am sure that overdevotion to details has had the harmful effect of obscuring principles, just as I am sure that our objective is not to impart a superficial acquaintance with innumerable details. There are surely other better ways of gaining our professional ends than swamping the students with detail; there must be. Accordingly every unit in the curriculum should be scrutinized closely to throw out detail after detail that can only be standing in the way of our overall objectives.

Third, because the literature of our profession in general is so poor, and because so much of great import is carried in people's heads or is available only in restricted or confidential documents, it is essential that library schools jointly undertake a program for the creation of videotapes which will do much to fill the gaps in our professional literature and provide students with firsthand resources which they should have in order to carry out their assignments. By means of high-quality audiovisual devices of this kind we can provide a vivid awareness of libraries, procedures, and people, in place of the present shadowy awareness of something or someone out there in some vague spot.

An illustration from the work of the Fry Associates will point up the potential. They made fifty films of circulation systems in operation in representative libraries. Unfortunately the films were destroyed when the book was published, but there survived an

eight-minute film which can be borrowed from ALA headquarters. By means of split-film technique, it compares and contrasts three manual circulation systems as they are operated by the same personnel in the charging and discharging of books. When this film is shown to students they grasp the realities of the situation far more readily than if they had done all the reading in the world. They are then in a position to record their observations profitably and they can discuss the three systems meaningfully in class. We ought to have many more teaching aids of this kind, only much more sophisticated. For circulation systems there is an alternative procedure which we could follow: we could acquire the equipment and supplies for each of the major charging systems and have our students operate them with stop watches in hand so they could make the actual comparisons for themselves, but in many other situations there is no alternative. If we want to create a vivid awareness of the work of the card division in the Library of Congress, of the work of the Lenin Library, and so on, for most of us the video tape is clearly the only or the best way in which we can bring these agencies and their activities to life for the students. And the same holds true for skillfully organized interviews with key librarians who are much too busy to write, whose publications are usually ghost written, yet who are the people who are shaping the library world of today and tomorrow. As a teaching profession we should not allow the leaders of the profession to disappear before recording them and their ideas in a superior way, cooperatively, for future generations of students.

In this third era of education for librarianship we must all keep our sense of historical perspective clearly in mind so that there is no risk of our continuing to follow, more or less blindly, in the footsteps of our predecessors, regardless of how distinguished they were. We must be fully aware that the library problems of the revolutionary period on which we are entering are in important respects different and more difficult than those of the former revolutionary period when the library schools came into existence; and because of that awareness we can put ourselves into a position to redesign the curriculum so that it will more precisely serve the emerging needs of our graduates. We have problems of size, of mass use, of population, and so on, of a dimension which we have not had to face before; and problems of this order will dominate the library scene during the lifetime of our students. There is a clear call for better and better professional education for those who are entering the field now and in the years ahead because the situations that they will meet are bound to be more complex and more perplexing than any met so far. Is it not the wisdom of our profession, rather than the knowledge or the techniques of it, that we should concentrate on conveying to our students so that they will not make our mistakes over again, and so that they will be

enabled to accept the greater responsibilities which go with the greater opportunities of today and tomorrow?

One last word: The expression "old fashioned" has been used several times in the course of this paper and it has been necessary to suggest that much, very much, of what we have been doing so well and so conscientiously should now be jettisoned. One does not look back on fifty years of professional life and say such things lightly or without feelings of compunction. This is far from the first time in library history that someone looked forward and saw a very different road ahead than the one he had been traveling. Cutter, for example, in 1904 found himself in a similar position. The years that have intervened since his day have been prosperous ones for our libraries, we have contributed a great deal, and we have learned much. But one thing we must not do or attempt to do, and that is to hold back in the slightest the changes that are beginning to take place and at a more rapid pace than we ever knew. The spirit of the library school instructor has always been, and must always be, that we are in business for the sake of our students, our graduates, who are the ones who hold the keys to the future in their hands. The reward of teaching consists in the satisfaction we derive from seeing former students succeed. So it is from that point of view that we can review what we have been doing and redesign the curriculum to make it a more perfect medium for the workers and leaders of the future.

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