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ABSTRACT

Information services provided by the reference librarians at the University of California at Los Angeles (UCLA) are outlined as an introduction to this document on projected services to the public by the Center for Information Services (CIS). The report discusses the types of data base which may be searched (bibliographic reference tapes, full text and numerical); the patterns of usage; output of the CIS; off-campus services; and the procedural relationships between the UCLA library and the CCN. Appendices to the report contain a schematic of a combined current and retrospective search operation, samples of search request forms and output formats, and a list of data bases for general reference and bibliography. (Volumes I and II of Phase I of this project -- the planning stages -- are available as LI 004165 and LI 004166.) (SJ)

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CENTER FOR INFORMATION SERVICES, PHASE II - DETAILED SYSTEM DESIGN AND PROGRAMMING

First Report On Public Service

By

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April 1970

Institute of Library Research
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Los Angeles, California

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CENTER FOR INFORMATION SERVICES, PHASE II

DETAILED SYSTEM DESIGN AND PROGRAMMING

A. Outline of Existing Services

A 1. Patrons and Questions

We may begin by outlining the existing patterns of information service which reference desks in the UCLA Library system are facing. Obviously we can exclude the very wide range of requests for directions around the campus, hours of opening during vacations, etc. ("information" in the general sense) and cover only questions involving substantive use of the library collections. In addition we may exclude from the present discussion four special libraries in the system:

William Andrews Clark Memorial Library
University Elementary School Library
Map Library
Oriental Library

* * * * *

What kinds of questions are presently asked of reference librarians, and who asks them? Time did not permit any detailed investigation of either of these matters, such as a statistical analysis of questions, or of telephoned questions, or of the typical questions of various segments of the academic population. And to discuss the various libraries individually would not produce many fruitful comparisons, since each library serves a different discipline. We will therefore present a brief summary of types of

patrons and types of questions, alluding where necessary to a particular library.

a. Faculty. Faculty members have two primary academic commitments, teaching and research. Since their use of the libraries is predominantly connected with the latter, and since they usually know the literature of their subject very well, many of the matters upon which they need to consult the reference librarian are either a) technical, or b) outside their main field of activity. By "technical" here is meant questions of procedure--how a particular topic or work might have been cataloged, or how access might be obtained to material which they have heard about, but which the library does not possess. Not infrequently their questions only arise at the limit of the library's resources, as they are genuinely breaking new ground--often, however, they can fall victim of the common habit of too quickly assuming that they have checked all the relevant sources and that the library "simply doesn't have what I need."

Very rarely do faculty members ask library staff to do extended literature searches: the Biomedical reference staff will perform them upon request, but the Physics Library's offer to do so met with the response "We have always encouraged both faculty and students to do their own literature searching." Mainly they need help with a specific item of information, such as a standard, value, formula, date, or with a sophisticated bibliographic problem--in either case, the hallmark of their request is its relatively high specificity.

The major abstracting and indexing publications are customarily available for humanities and social science faculty in URL, and for the physical and natural sciences, and technology, in their respective branch libraries. Sometimes users of the Physics, Chemistry, and Geology-Geophysics libraries have to go to EMS to consult a reference tool held there only (e.g., Science Citation Index, which is highly popular in all four physical science libraries, but which is also too expensive to be bought for all of them). In general, faculty members have their regular set of reference sources which they use without need of assistance. Humanities and social science faculty may occasionally have to choose (or guess) between URL and a branch library (e.g., Education-Psychology) but on the other hand they do not make such regular and systematic use of abstracting and indexing publications as do the scientists and technologists--nor, indeed are there anything like as many periodicals which abstract and index those areas. As the C.I.S. project develops, it is planned to conduct a major survey of present library use by faculty, and of their potential requirements from an operating Center for Informatio Services.

b. Graduates. Their needs are often every bit as specific and complex as those of the faculty, but they are by and large needs that can be met through the library's existing holdings and bibliographic resources. This is the logical outcome of the library's policy of detailed and co-ordinated advance planning for the indirect as well as the direct needs of graduate programs. The typical graduate student begins with a burst of bibliographic work as he gets the

measure of his new field of activity; then a spate of inter-library loan requests, not always necessary; then detailed inquiries on specific points as he narrows his attention and increases his depth of interest; and finally a reversion to bibliographic matters as he marshals the supporting material for his thesis. Graduate school is characteristically the stage at which the student really emancipates himself in library use, and thus while the questions are frequently taxing for the reference librarian, they often provide an excellent opportunity for him or her consciously to assist in that process. The reference librarian can usually suggest leads or sources or procedures that the graduate student hadn't thought of (this is true for faculty members too, but they are of course more experienced). Increasingly, reference staff are required to have a strong subject specialty, perhaps to the level of a Master's degree; and once the student realizes this, and begins to appreciate the outstanding bibliographic expertise of the modern academic librarian, he can usually be helped the more.

c. Undergraduates. For a variety of compelling reasons, the undergraduate library user is not the central focus of our attention at this stage. The main factor is that the information now appearing on tape is not, with very few exceptions, designed for his use, and does not fit easily into present patterns of undergraduate education, where the pressure to learn a collection of basic facts is so heavy that the undergraduate tends to make a formalized and predictable use of the library. Much of his reading is preselected and compulsory; consequently, the

reference librarian can often respond to his question by citing some specific source which she knows the students in a particular course must use.

Wilst not immediately in the picture, however, the undergraduate might well be using C.I.S. services in several possible ways in the not too distant future (certainly within this decade). One can envision a situation where a professor who has been working on, say, the 1970 Census file will want to introduce his students to it. He might then ask for a designated portion to be put in disc storage for the members of a particular class to use in a given assignment: here we have, in a sense, an automated counterpart of the Reserve Book Room. Another possibility clearly in prospect is that the professor will submit a group profile for his class, enabling each member to receive a regular listing of appropriate current reading material. (See Section B.) In view of the likely trend, therefore, the Center for Information Services should be designed with sufficient operating flexibility to cope with the traditional features of undergraduate demand, such as the need for mass duplication of material.

d. Off-Campus. Many of UCLA's libraries are continually in use by off-campus patrons; URL tends to be a convergence point for several reasons--potential borrowers have to obtain a library card there; or they have heard it is "The Research Library" and have rather easily persuaded themselves that what they want must be there; or they come to consult its large general reference

collection or the card catalog. Actual stack use is probably relatively light.

Teachers, alumni association members, and bona fide governmental or social workers can get courtesy cards, and non-UC students are charged $12 per year ($6 for 6 months) for borrowing privileges; for the rest, both companies and individuals, the library card is $24 per year. Use of the library system by high school students has recently been curtailed by requiring a letter from the school Principal attesting the genuiness of the need--many high school students, however, make regular use of the 'open to all' reference facilities.

Needless to say, the spectrum of questions from such a diverse group runs from the very simple to the most complex, sometimes compounded by the patron's overtly or covertly looking for a special service, such as an interlibrary loan. Compared to questions from the campus community, a larger proportion tend to be single fact questions, with emphasis on biography, geography, current affairs, and general science. The off-campus user wants to know, rather than to know where to find out; thus also there are correspondingly fewer purely bibliographic inquiries.

A 2. Interlibrary Co-operation.

UCLA's role in the expanding national network of interlibrary co-operation is already a crucial one; its very large and well-balanced research collections are for many institutions the definitive resource in the Southwest, as has been recognized, for example,

by the location of the Pacific Southwest Regional Medical Library at the UCLA Biomedical Library. In URL interlibrary lending presently exceeds interlibrary borrowing by almost 500% (24,000+ to 5,000+ in 1969) a ratio at which the situation may stabilize temporarily, but still one which implies a much greater per volume commitment of personnel and funds than if the flow had been the other way around, or even equal in both directions. Asking another library to send you an item merely involves checking the patron's citation; finding a probable source; despatching the request form; when the material arrives, notifying the patron; checking the work out to him; and eventually accepting it back again for return to the lending library. lending material to other institutions or even xeroxing 60% of the demand, as URL presently does, means considerably more: accepting the form; checking it against your public catalog or some other holdings list; arranging to have it retrieved from the shelf under one of several possible operating procedures, according to the item's location and status; copying or despatching it; if loaned, upon its return checking it in and feeding it into the reshelving routine.. Perhaps more important than the actual allocation of staff and funds, however, is the acceptance of professional responsibility which a regular fiscal commitment to interlibrary lending embodies. To ask another library to make an item available is relatively simple, especially when you know that a library is bound by a professional agreement to comply if it reasonably can: to undertake to lend material upon demand, at a rate of five books requested for every one you borrow, out of a sense of scholarly

co-operation and even national obligation, entails a well-developed set of procedures and safeguards, for the interlibrary lending library is in effect being required to expend more money, and at the same time to risk a weaker service to its own borrowers, than if it existed only for itself. As will be discussed in Section B, the clear challenge of mechanized information stores to this branch of librarianship is to devise ways of utilizing their unique propensities for the high-speed electronic copying, transfer and display of data by remote access without publicly overcommitting oneself, thereby provoking a tidal wave of outside requests for instantaneous access to 'UCLA's Data Banks', to the detriment of the basic mission, which is to serve the campus community. Methods should be explored of accomplishing a reasonable balance through such organs as EDUCOM, ASIDIC, and CRL.

At present, there are three broad patterns of activity in our interlibrary service:

1. To and From Other UC Campuses. Both Berkeley and UCLA lend heavily to all the campuses, including each other, with the Southern group making daily use of UCLA through the inter-campus buses. Of late, as campuses such as Santa Barbara and San Diego have grown from small to medium-sized research collections, demand has fallen--but only slightly, since their respective campus communities have likewise increased. UCLA finds it needs to lend fewer in-print titles and more older items--just as UCLA's demand upon Berkeley is each year for progressively older material.

2. To and From The Southern California Area. UCLA has already been forced to discontinue interlibrary lending to business and industry, but there is still in the Southern California region a complex network of governmental and other public agencies, plus several California State College campuses, the public libraries, and the special libraries of professional societies, etc. To all of these the collections of the state university are a major public resource.

3. To and From Research and Academic Libraries Nationally. UCLA Library is among the top group of research libraries in the country: it both lends to and borrows from most of the major universities in America, with the Library of Congress, through its maintenance of the National Union Catalog, acting as the pivot where necessary.

The traditional drawback to the interlibrary lending process has always been the protracted response time. Naturally this time will vary somewhat, according to which of the three main cycles an interlibrary transaction follows; the average is about four weeks from the borrower's submission of a request at his own library to his receiving the material. Computerized handling of information holds out the promise of virtually abolishing these long and stultifying response times through interactive ('on-line') capabilities via cathode ray tube consoles (T.V. screen) or teletype, etc. But that this vision can fail to be realized through imperfect planning of the many supporting operations is shown by the present operating situation of the UCLA MEDLARS station:

requests are accepted on the standard MEDLARS sheet; coded; punched; and the resultant deck of IBM cards is then sent to NLM through the regular mail, which is also how the results of the search are transmitted to UCLA. If UCLA's client is itself another library or medical institution, rather than the individual himself, the delays are compounded. Average response time, ironically, is about four weeks.

It will be obvious that interlibrary loan requests have a tendency to center upon older items and upon other material which is difficult of access in the U. S. As a rule, UCLA lends inprint publications only to other UC campuses, or when the work is clearly esoteric, as with non-English materials from smaller countries. This being so, it is hardly surprising that the cost per unit issued is inexorably rising.

B. C.I.S. In Relation To The Above

B 1. Introduction

For a basic summary of the conception of C.I.S., see parts 1 and 9 of the Phase I Report.*

It is important to remember that the C.I.S. project in its entirety is a 5 - 7 year program of research and development, and is necessarily evolutionary in character. This is to say that changes are occurring as we progress, and that therefore, preliminary

*Mechanized Information Services In the University Library. Phase I - Planning. Part I - "Introduction and Summary" and Part 9 "Developmental Program for a Center for Information Services". Los Angeles, University of California, Institute of Library Research, 15 December, 1967.

statements such as those in parts 1 and 9 are for general guidance--they obviously cannot embody final decisions on the myriad of details now needing attention. For example, there is in part 1 an outline of the library's role in a C.I.S. development (pp. 5-6), but the precise specifications of that role have still to be worked out. There are several feasible alternative levels, or configurations of library involvement; in the public service area especially, there is a range of possible ways in which library staff might mediate the C.I.S. operation to the public. For example, it is not yet clear whether reference librarians will be willing and able to do more than accept straightforward, natural language requests and pass them on for formulation to a trained specialist (a "C.I.S. Librarian") or whether they will themselves do the formulating when they are not on duty at the public service desk. The Reference staff of the Biomedical Library, for example, will prepare special bibliographies for faculty members upon request, and therefore may find that the opportunity to utilize mechanized resources enables them to provide a better service. On the other hand, the Physics Library or the Chemistry Library may find that the patron wishes to do as much of the search as possible himself. Furthermore, any special C.I.S. Librarians will probably be located in URL, and thus delays in the service will begin to appear if all the natural language requests have to be forwarded there. Once that happens, it is likely that the C.I.S. Reference Librarian will frequently find he has to call the patron to clarify certain points, and may even have to sit down to a conference with him, both of which might be avoided

if the branch reference librarian can actively monitor requests. However, three of the branches where this might operate with most effect do not employ 'reference librarians' as such. The Heads of the Physics, Chemistry, and Geology/Geophysics Libraries--the only professionally qualified librarians in their branch--share the reference duties with their Library Assistants. Whatever the answers to these organizational questions, it is important to stress that in terms of services offered, the C.I.S. in its first phase will be offering what amount to quite modest extensions of manual library operations.

B 2. Types of Data Base.*

The Phase I study found that there are three clearly identified types of data base that are candidates for acquisition by a Center for Information Services:

a) Bibliographic reference tapes: These customarily contain the bibliographic citation (e.g., MARC) or the citation plus the abstract (e.g., ERIC). In addition, a wide variety of subsidiary data can appear, such as grant number; translation details; CODEN or some other abbreviated journal title; a reference to the printed volume of which the tape is a counterpart, availability note, etc., etc. A compilation still in progress at the Institute of Library Research, UCLA, takes only 6 of the 50 or 60 available bibliographic

*A good discussion of different classes of mechanized files, and of the problems and potential uses of each, will be found in Reilly, Kevin D. "The Nature of Typical Data Bases" Part 5 of the Final Report on Phase I of this project. Los Angeles, University of California, Institute of Library Research, 15 December 1967.

data bases and lists approximately 115 names of fields or subfields. In some cases different names turn out to denote the same concept (e.g., Subject Terms, Keywords, Selector Terms, Descriptors, Access Words, Index Terms, Uniterms) whilst in every file there are at least 2-3 fields--sometimes even 20-30--which are unique in concept. However it is foreseen that there will prove to be sufficient similarity of structure for bibliographic files to be processed using flexible generalized programming techniques.

For retrieval purposes, not all of the 115 or more fields are equally significant; retrieval capability on Author, Title, Subject, Date, Abstract if any, and perhaps Publisher would form the first rank of priority, followed by such items as Granting Agency, Institution Name (e.g., Corporate Author in cases where there is also a Personal Author), Translation Note, etc. With this wide diversity of data elements in mind, an attempt is being made to create programs for C.I.S. which will allow retrieval upon whatever field names are present in a particular file. Such a technique would place upon the librarian the task of vocabulary control, for which it is envisaged that an increasingly large set of thesauri might have to be kept available at Reference desks, and it is not clear that this is the best solution.

In addition, from a primary bibliographic file, there are a number of conceptually derivative files which are fairly easily obtainable: the keyword-in-context (KWIC) listing of titles; author indexes; inverted subject files; author-and-titles listings; etc.

b) Full text: as Dr. Reilly has observed (op. cit.) this category partially overlaps the previous one, depending upon whether or not the abstract in a bibliographic file is to be actively processed, or merely treated as an indivisible item of data to be printed out, as are the journal title, or volume number, for example. To process the text of the abstract (a common requirement is the extracting of subject terms, and perhaps also counting their frequencies as a guide to their importance in the document) demands basically the same techniques as are beginning to be feasible with tapes containing one continuous text, such as the California Constitution and statutes, or the Journal of Chemical Documentation. As yet there are relatively few examples of genuine full-text tapes--that is, tapes which contain continuous text, such as books and periodicals. Most, such as Dissertation Abstracts with its long abstracts, or Webster's 7th Collegiate Dictionary, contain portions of text in an often-repeated fixed-structure record, and might more accurately be regarded as analogs of the standard bibliographic tape with abstracts. However, as a glance at almost any issue of the journal Computers And The Humanities will show, many projects are underway which involve computerized text processing--stylistic analysis can jump into a new dimension with automatic concordance generation, word-and phrase-frequency counts, analysis of spelling variations, rhyme and metre, sentence parsing, and a host of other fruitful approaches.

So whilst the emphasis in the initial period of C.I.S. will fall upon bibliographic reference tapes in the sciences and social

sciences (for few yet exist in Humanities subjects), the Humanities will not be far behind, and their demands are likely to be for fairly sophisticated services entailing text processing. Here the questions arise of how sophisticated a range of services C.I.S. should aim to provide, routinely; of how the needs of a patron requiring some special service might be met; and of how precisely the public service librarian will be given the means to handle such contingencies. It has been suggested, for example, that suitably accredited users (faculty members and perhaps Ph.D. candidates--and library staff?) be authorized to write their own programs at need, and then place the basic documentation on their programs on file in the C.I.S. Program Library, for the benefit of future users of the system. But what of the risk of the user inadvertently destroying the data thereby?

c) Numerical: here the prime example at the moment is the Census of 1970. In its original marketed form this will comprise just over 2000 reels of tape, which at the estimated cost of $60 per reel, comes to more than $120,000.

The processing of numerical files can involve both manipulation of data (e.g., the matching of values in one table against those in another) and calculation upon data, to generate what are in effect wholly new data bases. Manipulation of data is common to all three types of file, but this latter aspect, which means using the computer actually to compute, is a unique feature of numerical files. Although arithmetical techniques may be employed to do the manipulating of data in bibliographic or full-text files (e.g., assigning relative

weights to terms) the object of so doing is not the derivation of new data, but simply the better retrieval and display of existing data.

As presently envisaged*, the library's responsibility for processing numerical files will be confined to certain operations at the lower end of the spectrum:

-Data editing and cleaning.

-Derivation of data sets (e.g., aggregated statistics) from the original file. (Since a new data set may be stored on tape or disc and never actually appear in a printed version, provision should be made for the automatic documentation of such sets).

-Merging and reconciliation of records from several different files (e.g., from the Census of 1970 and succeeding decades).

-Limited statistical analyses such as: a) mean, variance, standard deviation, median, upper and lower quartiles, maximum and minimum values, etc., b) frequency counts, histograms and cross tabulations, c) correlations, regression analysis, factor analysis, etc.

-Data reformatting and transformation to a 'normalized' form.

B 3. Patterns of Usage

The pattern of usage of an incoming file will obviously depend upon the type of data the file contains, but having said that, it is still very necessary now to make a few intelligent guesses so

*From a thesis in progress by Mr. A. H. De Boer ot ILR.

that we can proceed with the design of specifications, to which any adjustments can be made at need during the early operational phase of C.I.S.

By common agreement, the first of the above three categories (bibliographic reference tapes) is the primary group that C.I.S. must focus upon, in terms both of the already large number of these files and of their close affinity to the library's existing bibliographic tools and services. Assuming that a bibliographic file has been ordered, on a continuing subscription, the first product to arrive will be the total file as it stands to date. Afterwards, the smaller, current tapes begin to come in at regular intervals. The acquisitions and cataloging procedures being complete, and the file announced as available, what kind of user demand, personal and corporate, is the librarian to expect?

Again, at the moment, being devoid of experience, we can only predict the answer by asking ourselves what would be logical; we can see that a user may ask, as a minimum, for one big retrospective search initially, followed by regular current searches of the update tapes, but we do not yet know the extent of this initial demand, the rate at which it might increase as C.I.S. services become publicized, or what different types of demand may arise.

a) Retrospective searching. The typical request will be for a search on one or more of the main bibliographic elements: Author, Title, Subject, etc., though as noted above, C.I.S. programs will have to be capable of meeting a broad spectrum of demands and an attempt is being made to allow the user to retrieve on whatever

named elements (fields) a file contains. Retrospective searching can be a lengthy and expensive operation; at UC Riverside, for example, Mrs. Kay Forrest has found that a search of Chemical Abstracts tapes going back only to January 1969 can cost almost $1000. However, it must be recorded that this was using the maker's own programs, not C.I.S. programs, which do not yet exist. Concurrently, work is in progress at ILR (UCLA) to develop a technique of superimposed coding--essentially, the encoding of file entries into a highly efficient binary index, which can be searched very rapidly to retrieve all those records in the file which could fit the search criteria, before going to the actual master file. This offers a potential method of overcoming this time-cost problem. In the meantime, however, it is obvious that there will be a sizeable demand for the retrospective search, and that it is squarely the responsibility of C.I.S. to provide it. Possible arrangements for cooperative funding should be explored, especially to cover those cases where a client needs repeated retrospective searches.

To make one further point about the Riverside example: given an acquisition rate of two Chemical Abstracts tapes per month (standard 2400-foot reels) that particular search was performed on a file of, say, 20-25 reels. The reels have been left unmerged because the primary Riverside service is current awareness (SDI) and because merging files is also a lengthy and therefore costly machine operation. In C.I.S. terms (and ignoring for a moment the possibility of superimposed coding) this problem would be an acute

one--tapes coming in at different intervals, each tape constituting a different percentage increment to the master file and each file subjected to different levels of demand--and one of the basic strategic questions being pondered by CCN staff working on C.I.S. is how to judge when it becomes more efficient to merge files, and which ones might profitably be left unmerged, at least until receipt of a request which made it necessary. Library staff might assist in the formation of a rational policy here, both by providing their assessments of likely usage, and by helping to create some guidelines for keeping usage statistics. System monitoring is a crucial element in the designing of C.I.S.

b) Current searching. As early as 1958, H. P. Luhn saw the pattern of service that must logically emerge from the advent of computerized information.[1] Like most genuine discoveries, it was a blend of existing knowledge, common sense and imagination. It is the technique called Selective Dissemination of Information (SDI), one of the most widely discussed and extensively tested developments so far to appear in information science.[2, 3] The element of existing knowledge was the basic, typical search strategy for extracting information from mechanized files, as outlined above.

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[1]Luhn, Hans P. "A Business Intelligence System" IBM Journal of Research and Development 2(4) October 1958 pp. 314-19

[2]Bivona, William A. and Edward J. Goldblum. "Selective Dissemination of Information: Review of Selected Systems and a Design for Army Technical Libraries" Prepared for U. S. Army Natick Laboratories, Natick, Mass., by Information Dynamics Corp., Reading, Mass. August 1966. Distributed by CFSTI as AD 636916.

[3]Connor, Judith H. "Selective Dissemination of Information: A Review of the Literature and the Issues" Library Quarterly 37(4) Oct. 1967, pp. 373 - 391.

The patron states his needs (primarily in terms of subject requirements, but allowing where necessary for specific authors, years of publication, etc.) and, when properly coded, this request is run against the file: anything which matches it gets retrieved. And presumably, if the data base is a serial publication (for example, the mechanized version of an abstracting and indexing periodical) the patron can return a month or so later and submit the same set of requirements. For this purpose, it is obviously only necessary to search the current tape; but if the patron is going to ask for the same search to be made upon every incoming tape, it is immediately clear that he might as well leave his request at the information center, and have the output sent to his office regularly. Hence the formulation of a profile of the patron's permanent subject interests which (this is the element of imagination) can itself be stored in machine-readable form. A file of these user interest profiles can thus be established, and the incoming tape run against it once. F. W. Lancaster has characterized the reversal in search technique that has occurred:

> The principal distinction between SDI and retrospective searching systems is that in the case of the latter, a user request precipitates a search of a document file, whereas, in the former, a document precipitates a search of a user file.[1]

Furthermore, the all-important element of feedback can now be introduced, with the purpose of system improvement. Depending upon how a given search satisfies the client, he can modify his profile,

[1]Lancaster, F. Wilfred. Information Retrieval Systems: Characteristics, Testing and Evaluation. New York, John Wiley, 1968. p. 53.

thus progressively improving the response from the retrieval system until a satisfactory combination is achieved as between the number of documents recalled and the precision of those recalled. (To specify terms very narrowly will of course reduce the percentage of the file that fits the criteria, thus risking the exclusion of significantly related material--and the converse is also true).

At this juncture, the retort may be made that librarians have been doing this sort of thing for years--as indeed they have. Any librarian who has mentally matched a recent acquisition against the known interest of a regular client, and has made a point of producing that document when the client next visited the library, has performed a selective dissemination of information, as Bivona and Goldblum rightly remark in their opening sentences. (op. cit. p. 1)

What S.D.I. does is to formalize this activity and render it machine-readable. This has two significant effects: first, it vastly increases the scale on which such individually tailored services can be undertaken by an already busy library, and second, it permits many refinements in the scope of the service. The librarian no less than the scholar has long wished that the library could find it economically feasible to use "techniques that penetrate the covers of documents" as J. C. R. Licklider aptly phrases it.* Abstracts can usually be supplied with the reference at minimal extra cost; terms to be employed as elements in the search can be given a numerical weighting, according to their relative importance;

*Licklider, J. C. R. Libraries of the Future. Cambridge, Mass., M.I.T. Press, 1965, p. 70.

precise subject keyword references can be extracted from the abstract or text, if the "given" subject headings are insufficient. These and other techniques provide the librarian with the means of giving to more people a faster and more versatile service than has ever been possible before. Even the tasks of charging S.D.I. searches to their respective requesters, maintaining current accounts for each patron, and addressing the output for mailing, can be handled by the computer. However, as the document on the ISSUES (Pro and Con) pointed out, these concepts of active dissemination of information presuppose that librarians see their role not as being that of a preserver of records, but as a specialist in the transmission of information to those who need it. To coin a comparison not intended to be unfavorable to either party, the librarian will have to see his function more in terms of a merchandizer who sends out his product on approval, knowing that a certain percentage of sales will cover the cost of mailing the item to those few who will want it. In the same way, it is obviously probable that the library's early attempts at disseminating current information will experience a percentage of failures, but it is clearly better that it should try than that it should wait for people to come to the library. The advent of these mechanized data bases--most of which cost several thousand dollars per year--gives a purely economic reason for seeking to enhance library services; of far greater weight, however, are the intellectual and scholarly reasons for doing so. And it has been found in most S.D.I. ventures, relatively few of which have so far been library-based, that this function of alerting the user

to the existence of recent relevant (or even possibly relevant) materials, is one of the most appreciated services to emerge from automation.

B 4. C.I.S. Output

The quality of output that users will receive from C.I.S. has always been regarded by project staff as bearing the utmost significance for the success of the whole system: as in several other areas of the C.I.S. development, our task is to define where the librarian's responsibility begins and where it ends, and to specify as closely as we are able the procedures which will lead to the desired system for the library.

To take first the tape files themselves, it is obviously no part of the library's function to verify or guarantee the authenticity of the actual data. Any checking that the library (through its C.I.S.) does, will have the simple aim of establishing that what is on the tape is indeed what was ordered, and will probably consist of a quick sample check such as is carried out upon incoming reels of microfilm. Keypunching errors there are sure to be, just as there are typographical errors in the books we handle.

Second is the problem of the physical quality of the output. For the moment we are dealing almost exclusively with printed output, though the ramifications of UCLA's interactive system, URSA, should be borne in mind for the future. In a cooperative venture such as C.I.S., the library will have only partial control over the quality of the printout. Upon such traditionally disappointing features of

computer printout as poor ink, flimsy paper, decayed characters on the page, bad alignment of letters (giving the printed line a mildly undulatory quality), 'upper-case only' printing, and inferior carbon copying--upon these the library and even CCN can exert only very limited influence, for these are the 'built-ins' of the system. An upper-and-lower-case print chain may be available to C.I.S. via the library's own computer (whatever model it possesses by the time of first operation) and there may also be the capability to print the output on file cards as well as on the familiar unwieldy 11 x 15 inch sheets of paper; but for the rest, it looks as though the library is at the mercy of the hardware, and specifically IBM's hardware.

Although to do so may be an exercise in choosing the inevitable (since these aspects too are a by-product of machine operation) I think that we should try to establish specifications for two particularly crucial elements in the output process--the typical response times for various services, and the charges for those services which are to be paid for by the client (at the beginning, this may mean all of them). Is the user to pay according to the fairly complex system of charges involved for actual machine use by CCN, or is he to pay a fixed sum per term retrieved ("per hit") regardless of the machine time taken to make the hits, which is arguably the responsibility of the C.I.S. programming effort? As to response time, this will be broadly dictated by the necessity of processing in batch-mode and the volume of business at CCN; if a client submits a request one day, can the librarian tell him with reasonable confidence to return the following morning? If

a request comes in at 8 or 9 a.m., could it be processed and available the same afternoon? What scheme of special arrangements could be devised for that all-too-familiar figure at the reference desk, the patron who has simply left it too late and who needs a response within an hour or two?

The remaining element to be discussed is one for which C.I.S. could and should define its specifications, namely the output fo) at.

As the accompanying examples of ERIC output demonstrate, the arrangement in which output is printed is (within reasonable limitations) a matter of choice, and it needs only a relatively few changes in that part of the program which controls the output, to modify it. Some standard formats should be designed for a range of basic and often-needed services, such as the retrospective search, the current search, etc., but the system should also allow for files with special characteristics to generate different formats, and, in certain cases, for the patron to stipulate a format for a special purpose.

Regarding the general specifications for formatting, among the questions which need to be answered are:

-Size of sheet fixed or variable?
-Output available in other forms, e.g., punched cards, tape, printed cards, etc?
-What typical page density should be sought--single or double column, or either, etc?
-Lower-case printing available as standard or extra?
-Duplicate copies to be standard or extra (duplicates to be made by repeat printing or by carbon copying)?

In addition, specifications for each of the three broad types of file will have to include guidelines as follows:

a) Bibliographic files

-Abstract standard or extra?
-Subject headings at top? If so, how many subject entries per record?
-KWIC and other indexes available as a standard service? (N. B. This question involves decisions on such matters as which files from a given manufacturer we should purchase, and to what extent we should purchase, and to what extent we should derive further files--such as KWIC indexes--from a master file)

b) Text files

-How much of any one text can be printed out without special arrangements (e.g., for copyright)?
-Keywords to be identified within a text (e.g., by capitalizing) or in the margin?
-Concordance generation available as a standard service?
-Word frequency tabulations available as a standard service?
-Other data analysis services, if any, to be provided as standard?

c) Numerical files*

-What format(s) should be available for the printing of numerical data--aggregate data, answers to computations, etc?
-What provision should be made for graphical presentation?
-What provision should be made for display of control data (during scanning of the tape, and prior to final analysis of aggregate data)?

One further point which needs mentioning is that the library obviously could not support extended research projects using, say, the Census files. Funding for such applications will probably come from the customary sources, i.e., grants. The reference librarian--or whoever acts as the 'user interface' for C.I.S. services--will need clear guidelines (preferably embodied in a written list) to enable him accurately to evaluate requests in these terms.

*Output formatting for numerical files will be discussed by Dr. Reilly in his coverage of the Census.

B 5. Off-Campus Service

For an outline of the general policy considerations in this question, see the C.I.S. Seminar document ISSUES (Pro and Con). At this point, let us make two assumptions, a) that a substantial off-campus demand for service will in fact arise at a fairly early stage in C.I.S. operations, and b) that the library--as it has always done in the past--will attempt to meet an off-campus need to the extent that it can do so without jeopardy to on-campus users.*

-How would such a service be managed? Could it be fully integrated with the existing fees and procedures?
-What forms and files will be called for?
-Assuming that some form of search charge will be made, will it be commensurate with rates for the campus community? How is the user to be billed?
-Would the library undertake to provide access only to UCLA data bases, or to the resources of the nine campuses (e.g., Chemical Abstracts at Riverside, NAL CAIN tapes at Davis) or to the full range of data bases to which UCLA, through a network such as that envisaged by EDUCOM, has access?
-What turnaround times should be quoted to the prospective user? Should they be the same as for campus users, or would a priority system be called for?
-Instead of sending an employee up to UCLA, could a user be permitted some form of on-line access, if not to the files themselves, at least to the C.I.S. input station by teletype (cf. interlibrary requests)?
-Should the library limit its off-campus service to retrospective searching, and shun the probable difficulties of trying to provide S.D.I.?
-What happens when the off-campus client needs a service which demands special programs? Is he to have access to whatever programs C.I.S. staff or UCLA researchers have created? Is he to be permitted to create his own?

-Is the user to be limited to standard C.I.S. output formats, or is he to be allowed to specify his own?
-Treating other UC campuses and other universities as off-campus users, what types of service should C.I.S. aim to provide?

B 6. Procedural Relationships between the Library and CCN

An aspect which can be only briefly mentioned here is the question of physical coordination between the library and CCN:

-At what intervals will requests be batched and transmitted to CCN (daily? Irregularly?)?

-How will they be transmitted (special messenger? campus mail?)?

-From whom in the library will they be transmitted, to whom at CCN? What written controls will be called for (forms, carbon copies, signatures, etc.)?

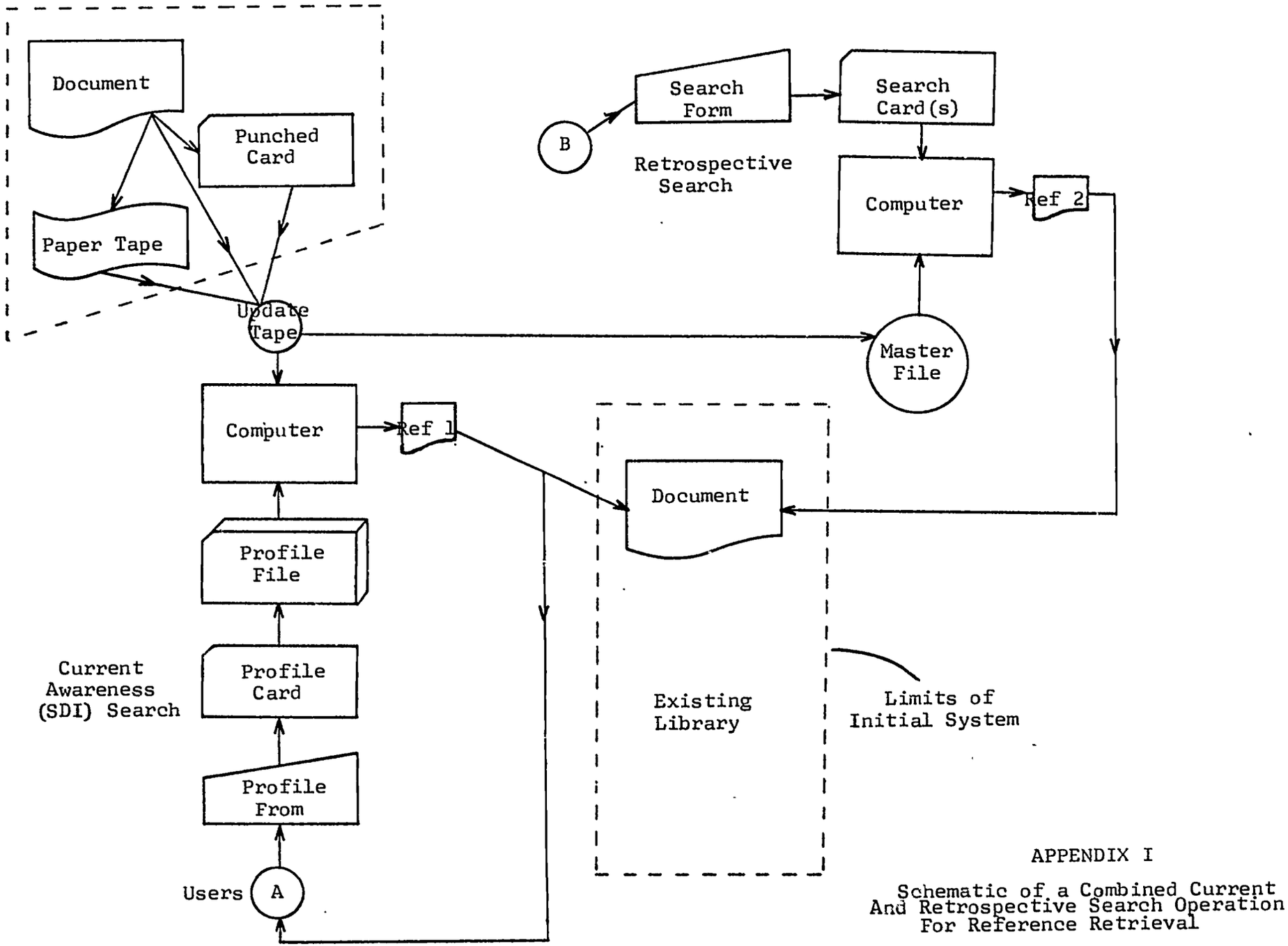
-How will the small on-line segment of C.I.S. operation be handled? (i.e., if the user is directed to CCN to sit at a console, what means could be used to give him access to data? What data security measures are needed?)

-What arrangements should the library specify for physical maintenance of the tapes? (Service bureau?)

-To whom in the library would a CCN staff member direct any on-the-job problems that arose (batch or on-line)?

-What forms and procedures might be used for accounting? Do the present procedures of either the library or CCN have features that could be integrated?

-What usage statistics would the library want CCN to maintain and report?



APPENDIX I

Schematic of a Combined Current And Retrospective Search Operation For Reference Retrieval

APPENDIX II

SAMPLES OF SEARCH REQUEST FORMS

LITE SEARCH STATEMENT

(Type or print plainly)

NAME OF REQUESTER	RANK
ORGANIZATION *(Include full office symbol(s), etc.)*	
STREET OR MAILING ADDRESS	
CITY, STATE & ZIP CODE	
AUTOVON / FTS	
COMMERCIAL TELEPHONE *(Area Code & Number)* / EXTENSIONS	

FOR LITE USE ONLY

RECEIVED BY *(Check applicable block)*: ☐ TELEPHONE ☐ MESSAGE ☐ LETTER ☐ IN PERSON ☐ FRAMED BY USER

SEARCH NO.

ATTORNEY *(Initials)* ☐ FRAMER ☐ REVIEWER

DATE & TIME IN / DATE & TIME OUT

REMARKS

FORMAT OF OUTPUT DESIRED. *(Check applicable block)*

☐ CITE _____ *(Citations only)* _____ *(Digests for Published CG Decisions only)* ☐ KWIC *(Key word displayed in context)*

☐ PRINT *(Full text of document - Do not request if source material is available to you)* ☐ OTHER

PROCESS AGAINST *(Check applicable blocks)*

☐	U. S. CODE	☐	ASPR	☐	COURTS MARTIAL REPORTS	☐	AFR *(Specify)*
☐	CG DECISIONS *(Unpublished)*	☐	DCAA MANUAL	☐	COMA	☐	AFM *(Specify)*
☐	CG DECISIONS PUBLISHED SINCE 1939 ONLY	☐	DOD DIRECTIVES & INSTRUCTIONS	☐	BOARDS OF REVIEW	☐	OTHER *(Specify)*
☐	ALL PUBLISHED CG DECISIONS						

Fold Here

RESEARCH PROBLEM *(State briefly)*

Fold Here

KEY WORDS AND PHRASES *(If possible, indicate desired relationship between words or groups of words; i.e., in one phrase, same sentence or document)*

MAIL TO:

AFAFC (SJA)
3800 YORK ST
DENVER CO 80205

(In case you are framing the search, use AFAFC Form 2013A for framing)

Submit original & two copies to AFAFC.

AFAFC FORM 2013 JUN 68 PREVIOUS EDITION MAY BE USED.

atch 2

LITE SEARCH STATEMENT (Continued) (Please type or print clearly)	REQUESTED BY (Name, Organization, & Address)		
COL. 1	COL. 2	COL. 3	COL. 4

LITE * * Automated Abstracting, Indexing and Distribution System

Profile Interest Words

Word Groups	Definitive Interest Words
WORD 1	
WORD 2a	
WORD 2b	
WORD 3a	
WORD 3b	
WORD 3c	
WORD 4a	
WORD 4b	
WORD 4c	
WORD 4d	

AFAFC FORM JAN 68 T-7

atch 3'

FORM L-4 6/66

119419

Special Evaluation Query

for The Profession only

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Western Union Building, 60 Hudson Street, New York, N. Y. 10013 Telephone: WO 4-4020

PLEASE TYPE OR PRINT CLEARLY

NAME

FIRM

ADDRESS

CITY STATE ZIP CODE

ACCOUNT NUMBER DATE

BASIC FIELD OF LAW

PLEASE X JURISDICTION DESIRED

		FEDERAL			
ALABAMA		LOUISIANA		OHIO	
ALASKA		MAINE		OKLAHOMA	
ARIZONA		MARYLAND		OREGON	
ARKANSAS		MASSACHUSETTS		PENNSYLVANIA	
CALIFORNIA		MICHIGAN		RHODE ISLAND	
COLORADO		MINNESOTA		SOUTH CAROLINA	
CONNECTICUT		MISSISSIPPI		SOUTH DAKOTA	
DELAWARE		MISSOURI		TENNESSEE	
FLORIDA		MONTANA		TEXAS	
GEORGIA		NEBRASKA		UTAH	
HAWAII		NEVADA		VERMONT	
IDAHO		NEW HAMPSHIRE		VIRGINIA	
ILLINOIS		NEW JERSEY		WASHINGTON	
INDIANA		NEW MEXICO		WEST VIRGINIA	
IOWA		NEW YORK		WISCONSIN	
KANSAS		NORTH CAROLINA		WYOMING	
KENTUCKY		NORTH DAKOTA		WASHINGTON D.C	

EACH JURISDICTION IS REGARDED AS A SEPARATE QUERY

I REQUEST CASES REGARDING:

BACKGROUND OF MY REQUEST IS AS FOLLOWS:

ATTORNEY'S COPY

THE SPECIAL EVALUATION QUERY

1. Our desire is to service you efficiently, competently and quickly with case citations relevant to your query.
2. Having gathered all the facts you then assess your problem and decide the issues and the basic field of law to be approached.
3. Then prepare your question completely as possible using all pertinent descriptive words and phrases as you were doing the research yourself. The staff attorneys in our Special Evaluation Division will evaluate your query and submit your relevant case citations to you promptly
4. Our service will give you case citations in any field of law in any of the United States jurisdictions.

ILLUSTRATION

. X Corporation employed Y and paid him a salary. X temporarily assigned Y to work for Z corp. While Y was so engaged he negligently operated his automobile and injured A. X asks if he is liable to A.

As the problem is presented, there are many relevant issues. The attorney's task is to formulate one question, which will cover all of them, if possible.

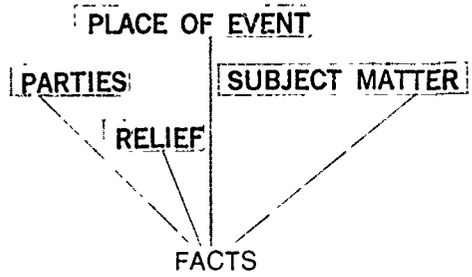
It must include:

1. Relationship between X and Y.
2. Relationship between Y and Z.
3. Whether X had control over Y at the time.
4. That Y was negligent.

A suggested wording:

Whether X is liable for personal injuries sustained by A due to the negligent operation of an automobile owned and operated by Y who was nominally employed by X but was [illegible] by Z

1. KNOW THE FACTS



2 DECIDE THE ISSUES

LIABILITY?
NEGLIGENCE?
EMPLOYER EMPLOYEE?
OTHER?

3 FRAME THE QUESTION

IS THE EMPLOYER LIABLE?

45408

THESAURI ORDER BLANK COMPUTERIZED LEGAL RESEARCH

LAW RESEARCH SERVICE/INC.

Western Union Building, 60 Hudson Street, New York, N. Y. 10013 Telephone: WO 4-4020

SOLD TO

AREA DIRECTOR

ACCOUNT NO. | AREA CODE | STATE CODE

CIRCLE CODE NUMBER FOR STATES THESAURI DESIRED

Code	STATE THESAURI	QTY.	STATES	CODE NUMBERS	STATES	CODE NUMBERS
1.	Corporations, Contracts and Business Law		Alabama 01	1 2 3 4 5 6 7 8	Montana 31	1 2 3 4 5 6 7 8
2.	Criminal Law		Alaska 02	1 2 3 4 5 6 7 8	Nebraska 32	1 2 3 4 5 6 7 8
3.	Domestic Relations		Arizona 03	1 2 3 4 5 6 7 8	Nevada 33	1 2 3 4 5 6 7 8
4.	Estates and Wills		Arkansas 64	1 2 3 4 5 6 7 8	New Hampshire 34	1 2 3 4 5 6 7 8
5.	Evidence and Procedure		California 04	1 2 3 4 5 6 7 8	New Jersey 35	1 2 3 4 5 6 7 8
6.	Negligence		Colorado 05	1 2 3 4 5 6 7 8	New Mexico 36	1 2 3 4 5 6 7 8
7.	Public Law and State Taxation		Connecticut 06	1 2 3 4 5 6 7 8	New York 62	1 2 3 4 5 6 7 8
8.	Real and Personal Property		Delaware 07	1 2 3 4 5 6 7 8	North Carolina 40	1 2 3 4 5 6 7 8
	FEDERAL		Florida 10	1 2 3 4 5 6 7 8	North Dakota 41	1 2 3 4 5 6 7 8
9.	Admiralty and Law of the Sea		Georgia 11	1 2 3 4 5 6 7 8	Ohio 42	1 2 3 4 5 6 7 8
10.	Anti-Trust and Unfair Trade Practice		Hawaii 12	1 2 3 4 5 6 7 8	Oklahoma 43	1 2 3 4 5 6 7 8
11.	Banking and Insurance		Idaho 13	1 2 3 4 5 6 7 8	Oregon 44	1 2 3 4 5 6 7 8
12.	Bankruptcy		Illinois 14	1 2 3 4 5 6 7 8	Pennsylvania 45	1 2 3 4 5 6 7 8
13.	Constitutional Law and Public Authority		Indiana 15	1 2 3 4 5 6 7 8	Rhode Island 46	1 2 3 4 5 6 7 8
14.	Contracts and Agency		Iowa 16	1 2 3 4 5 6 7 8	South Carolina 47	1 2 3 4 5 6 7 8
15.	Corporations and Securities		Kansas 17	1 2 3 4 5 6 7 8	South Dakota 50	1 2 3 4 5 6 7 8
16.	Criminal Law		Kentucky 20	1 2 3 4 5 6 7 8	Tennessee 51	1 2 3 4 5 6 7 8
17.	Copyright, Trademarks and Patents		Louisiana 21	1 2 3 4 5 6 7 8	Texas 52	1 2 3 4 5 6 7 8
18.	Family Law		Maine 22	1 2 3 4 5 6 7 8	Utah 53	1 2 3 4 5 6 7 8
19.	Federal Procedures		Maryland 23	1 2 3 4 5 6 7 8	Vermont 54	1 2 3 4 5 6 7 8
20.	Health and Welfare		Mass. 24	1 2 3 4 5 6 7 8	Virginia 55	1 2 3 4 5 6 7 8
21.	Labor Relations		Michigan 25	1 2 3 4 5 6 7 8	Washington 56	1 2 3 4 5 6 7 8
22.	Natural Resources		Minnesota 26	1 2 3 4 5 6 7 8	West Virginia 57	1 2 3 4 5 6 7 8
23.	Negligence		Mississippi 30	1 2 3 4 5 6 7 8	Wisconsin 60	1 2 3 4 5 6 7 8
24.	Property		Missouri 27	1 2 3 4 5 6 7 8	Wyoming 61	1 2 3 4 5 6 7 8
25.	Taxation				Wash. D.C. 37	1 2 3 4 5 6 7 8

TOTAL ORDER FEDERAL _____ at $75 = $

TOTAL ORDER STATE _____ at $75 = $

TOTAL ORDER _____ $

TERMS NET 30 DAYS

DEPOSIT $

SPECIAL INSTRUCTIONS

BALANCE $ DUE

FOR OFFICE USE ONLY

AUTHORIZED SIGNATURE | SALESMAN'S SIGNATURE | DATE

THE ABOVE ORDER INCLUDES SUPPLEMENT SERVICE FOR THE NEXT FIVE YEARS WITHOUT ADDITIONAL CHARGE

FORM LS 6/68

ATTORNEY'S COPY

109999

MEDLARS Search Station
Biomedical Library
University of California
Center for the Health Sciences
Los Angeles, California 90024
(213) 825-5341

May 19 1969

MEDLARS SEARCH REQUEST

DATE 19 May 1969

Is this your first request to MEDLARS?

[X] YES [ ] NO

1. INDIVIDUAL WHO WILL ACTUALLY USE THIS BIBLIOGRAPHY

First: John Middle: Q. Last Name: mith, M.D.

TELEPHONE NO.: 825-5341

2. TITLE: Associate Professor

3. ORGANIZATION (Department, Bureau, Branch, Division, etc.)

Dept. of Environmental Health

School of Public Health

4. ORGANIZATION (University, Corporation, Company, etc.)

U.C.L.A.

5. STREET ADDRESS AND CITY

Los Angeles

6. STATE AND ZIP CODE

California 90024

7. REQUEST SUBMITTED BY (If different from above)

Mrs. Phyllis Mirsky, Biomedical Library, U.C.L.A.

TELEPHONE NO.: 825-5601

8. SEARCH ANALYST (Leave Blank)

ALL OF THE QUESTIONS THAT FOLLOW ARE DESIGNED TO PROVIDE INFORMATION NEEDED TO DEVELOP A BIBLIOGRAPHY THAT IS RESPONSIVE TO YOUR NEEDS. YOUR CARE IN PROVIDING FULL INFORMATION WILL AFFECT THE USEFULNESS OF THE CITATIONS THAT YOU WILL RECEIVE.

9. DETAILED STATEMENT OF REQUIREMENTS. Please describe, in your own words, the subject matter for which the search is to be conducted. Be as specific as possible. Define any terms that may have special meaning in your request. Also if there are points NOT to be included, please state these.

Correlation of ecologic contaminants or mutagens such as pesticides and air pollutants with the incidence of chromosomal aberrations in higher animals. Radioactive contamination is not wanted. In vitro studies on the genetic material and the effects of these factors would be of interest.

DEADLINE: As soon as possible please (Allow 4 weeks)

10. SEARCH PURPOSE. Please indicate the purpose for which this search will be used (e.g., preparation of a book, book chapter, journal article, or review article; for immediate clinical application, ongoing research; prospective research, grant application; paper presented at symposium, etc.). Give specific details that will put your request into context.

For possible publication of journal article

11. SEARCH LIMITATIONS: Please check all boxes that are appropriate to the scope of your request. State your needs as specifically as possible, even though we may not be able to meet these precise needs in some cases. Your replies will allow the search analyst to design a strategy that, as far as possible, will avoid types of literature that are of no interest to you.

☐ NO RESTRICTIONS

☒ HUMAN SUBJECTS

☒ VETERINARY MEDICINE: If only certain animals or animal groups are of interest, please list these:

Vertebrates

☒ ANIMAL EXPERIMENTS: If only certain animals or animal groups are of interest, please list these:

Vertebrates

☐ MALE

☐ FEMALE

☐ NORMAL STATE

☐ CLINICAL RESEARCH *(testing of drugs or technics in humans only)*

☐ DISEASED STATE

☒ IN VITRO STUDIES *(of animal or human tissues or fluids only)*

☐ CASE HISTORIES

LANGUAGE RESTRICTIONS:

☐ ACCEPT ALL LANGUAGES

☒ ACCEPT ONLY ENGLISH

☐ ACCEPT CERTAIN LANGUAGES ONLY *(please specify)*

AGE GROUPS: If only certain age groups are of interest, please indicate which ones:

____ to 1 month	____ 6-12 years	____ 45-64 years
____ 1-23 months	____ 13-18 years	____ 65- years
____ 2- 5 years	____ 19-44 years	

GEOGRAPHIC RESTRICTIONS: If only certain regions are of interest, please list these:

12 KNOWN RELEVANT PAPERS Please carry out a preliminary literature search of your own before submitting this request to MEDLARS, and supply full bibliographic citations below for relevant articles you have found. Wherever possible, they should be journal articles published since January 1966. These citations will be used as a guide in retrieving similar citations related to your needs. They will also be used in a later appraisal of the results of this search. If no relevant papers have been found, please state "none found".

a. Bartalos, M. Somatic and genetic changes due to environmental pollution. Med Ann DC 37: 160- , March 1968

b. Juchau, M.R. Effects of 3,4-benzpyrene, phenobarbital, and chlordane on the nucleic acid and protein content of subfractions of rat liver homogenates. Biochem Pharmacol 15: 1453-64, October 1966.

c. Shanahan, G.J. Mutations in the sheep blowfly Lucilia cuprina (Wied.). II. Studies on genes for black pupa and dieldrin-resistance. Bull Entom Res 56: 283-6, Dec. 1965.

d.

e.

If you used INDEX MEDICUS for your preliminary search please list the subject headings under which you sought citations:

Mutation
Chromosome abnormalities
Chromosome aberrations
Mutagens
Air pollution
Pesticides

13. SEARCH REQUIREMENT Please check one of the boxes below to indicate the type of search that you would prefer:

[X] A broad search designed to retrieve as many as possible of the relevant citations, but which might also retrieve many irrelevant citations.

[ ] A narrow search designed to retrieve some only of the relevant citations, but with few accompanying irrelevant citations.

NUMBER OF CITATIONS EXPECTED Please check the appropriate box to indicate the number of journal articles dealing with the subject of your request that you consider likely to have been published since January 1966.

[ ] 0	[X] 10 - 50	[ ] 101 - 200
[ ] 1 - 9	[ ] 51 - 100	[ ] 201 - 500
		[ ] OVER 500

14. PRINT ON:

[X] 3" × 5" cards or [X] 8½" × 11" paper

15. How did you first hear about MEDLARS?

DATRIX

Direct Access To Reference Information: a Xerox service

Be sure you have read the Special Instructions on the reverse side of this form.

DATE _____

PLEASE PROCESS MY ORDER FOR A DATRIX SEARCH BASED ON THE FOLLOWING KEY WORDS: (please print)

PUBLICATION DATES FROM _____ TO _____

KEY WORDS	AND	AND	AND	EXCLUDED KEY WORDS
OR				
OR				
OR				
OR				
OR				
OR				
OR				
OR				
OR				
OR				
OR				

UNIVERSITY PREFERENCES: If search is to be limited to dissertations written at specific schools, print schools below. Otherwise, search will be made of all schools in program.

_____

_____

_____

_____

_____

WHICH KEY WORD LIST DID YOU USE?

- ☐ Chemistry/Life Sciences
- ☐ Engineering/Physical Sciences
- ☐ Humanities/Social Sciences

BRIEFLY PARAPHRASE YOUR DATRIX SEARCH GOAL.

_____

_____

_____

_____

MAILING INFORMATION

Name / Title _____

Organization _____

Address _____

City _____ State _____ Zip _____

TELEPHONE ___ area code _____ number _____

BILLING ADDRESS (if different)

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After completing this form, mail it to University Microfilms, Xerox Corporation, Ann Arbor, Michigan 48106. Telephone 313-761-4700

University Microfilms attempts to supply complete and accurate information through the DATRIX service, but does not assume any liability for errors or omissions

All DATRIX queries and results are held in strict confidence by University Microfilms.

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IMPORTANT
Please read these instructions completely before filling out the order form.

1. Use *one* order form for each DATRIX inquiry, do not attempt to use one order form for two or more inquiries. If you do, the search will be incomplete for all inquiries.

2. Use key words from only *one* Key Word List for your inquiry. Subject Headings (page 7 in Key Word List) *and* words from titles are key words. Remember, many subject areas are included in two or more Key Word Lists to facilitate interdisciplinary searching (e.g., key words used to be dissertations in the field of Statistics are duplicated in all three Key Word Lists).

3. To broaden your search place alternate key words (or key word synonyms) VERTICALLY in a column on the order form. To restrict your search place key words HORIZONTALLY in rows.
   a. For example, assume that you wanted to identify those dissertations dealing with compensation of supermarket employees. Since research on this subject could be expected in the fields of Economics, Business Administration, and/or Law, the Humanities/Social Sciences Key Word List would be selected. You could then fill out the form like this.

KEY WORDS	AND	AND	AND	EXCLUDED KEY WORDS
OR COMPENSATION	SUPERMARKET	EMPLOYEE		

   b. Now, suppose that you wanted to broaden your search to cover dissertations dealing with the compensation or training of supermarket employees or managers. You could then select alternate key words or synonyms as shown in this example:

KEY WORDS	AND	AND	AND	EXCLUDED KEY WORDS
OR COMPENSATION	SUPERMARKET	EMPLOYEE		
OR TRAIN*		MANAG*		
OR		PERSONNEL		

   The asterisk after the words TRAIN and MANAG will retrieve all variations of these root words. TRAIN* will retrieve every reference in the Humanities/Social Sciences Key Word List (but not the other two lists) that contains a word beginning with TRAIN (e.g., TRAIN, TRAINEE, TRAINABLE, or TRAINABILITY). MANAG* will retrieve all dissertation titles containing the reference words MANAGE, MANAGER, MANAGERIAL, or MANAGEMENT. PERSONNEL was added because this is a synonym of EMPLOYEE and probably would be used in titles of relevant dissertations. Note that it is necessary to enter each key word or root word only *once* in order to order a complete search.

4. CAUTION. Too many key words entered across the columns may unnecessarily restrict your search. Use as your guide the frequency count shown for each word in the Key Word Lists. For example, if you are seeking dissertations that concern the training of supermarket personnel for advancement, the order form could be filled out like this.

KEY WORDS	AND	AND	AND	EXCLUDED KEY WORDS
OR TRAIN* (2374)	SUPERMARKET (14)	EMPLOYEE (80)	ADVANCE* (64)	
OR		MANAG* (521)	PROMOT* (86)	
OR		PERSONNEL (396)		
OR (2374)	(14)	(997)	(150)	

   The maximum number of references that can be retrieved for any inquiry is the *smallest* sum of the frequency counts in any one column (14 in the above example). In the above example, the cost of the search if 14 references are found ($5.40) is only slightly more than the cost if 10 or fewer references are found ($5.00). In situations like this, where a low frequency count key word (e.g., SUPERMARKET) used alone will retrieve only slightly more references than if used with modifiers, it is recommended that modifiers be omitted. (In the above example, TRAIN is also a modifier as well as the words in columns III and IV.)

   It is not necessary to enter frequency counts on your order; those above are shown for example only.

5. For maximum effectiveness of the search, subjects commonly titled or described with compound words such as DATA PROCESSING, NORTH AMERICA, AUDIO VISUAL should be listed on the order form in separate horizontal columns, that is, DATA and PROCESSING, NORTH and AMERICA, AUDIO and VISUAL.

APPENDIX III

SAMPLES OF OUTPUT FORMAT
(MARC, ERIC)

TAG MARC DATA

490 T
490 Reprints of economic classics.
500 Reprint of the 1923 ed.
504 Bibliographical footnotes.
600 Smith, Adam, 1723-1790.

001 66021695
050 HD4901 .T48 1969
100 Thompson, William, 1775-1833.
245 Labour rewarded. The claims of labour and capital conciliated; or, How to secure to labour the whole product of its exertion, coy one of the idle classes (William Thompson)
260 New York, A. M. Kelley, 1969.
300 viii, 127 p. 22 cm.
490 Reprints of economic classics
500 Reprint of the 1827 ed.
650 Labor and laboring classes.
650 Labor economics.
700 One of the idle classes.

001 66022509
050 DS655 .N4 1968b
100 Nelson, Raymond.
245 The Philippines.
260 New York, Walker [1968]
300 192 p. illus., maps, ports. 22 cm.
490 New nations and peoples
504 Bibliography: p. 167-173.
652 Philippine Islands.

001 66022948
041 engjap
050 DS884.S3 H353 1968
100 Harada, Kumao, 1888-1946.
240 Saionji K o to seikyoku. English
245 Fragile victory; Prince Saionji and the 1930 London treaty issue, from the memoirs of Baron Harada Kumao. Translated with an introd. and annotations by Thomas Francis Mayer-Oakes.
260 Detroit, Wayne State University Press, c1968.
300 330 p. illus., map (on lining-papers), ports. 26 cm.
500 At head of title: Saionji-Harada memoirs.
500 Translation of v. 1 of Saionji K o to seikyoku (romanized form)
500 Originally published as the translator's thesis, University of Chicago, 1955, under title: Prince Saionji and the London Naval Conference.
504 Bibliography: p. 312-323.

TAG	MARC DATA
600	S
652	Japan Politics and government 1868-1912.
652	Japan Politics and government 1912-1945.
611	London Naval Conference, 1930.
700	Mayer-Oakes, Thomas Francis, 1912- ed.
740	Prince Saionji and the 1930 London treaty issue.
740	Saionji-Harada memoirs.

001	66023067
050	TH8531 .B7
100	Brann, Donald R.
245	How to lay ceramic tile, by Donald R. Brann.
260	Briarcliff Manor, N.Y., Directions Simplified [1967] c1966.
300	49, [1] p. (p. 47-[50] advertisements) illus., plans. 23 cm.
490	Easi-bild simplified directions, 606
650	Tile laying.
650	Building Amateurs' manuals.

001	66024150
050	RA418 .D56
245	Disease, the individual, and society; social-psychological aspects of disease; a summary and analysis of a decade of research, by Gerald Gordon [and others]
260	New Haven, College & University Press c[1968]
300	660 p. 23 cm.
500	Summarizes 248 research projects listed in the 1953-60 issues of An inventory of social and economic research in health.
504	Includes bibliographical references.
650	Social medicine.
700	Gordon, Gerald A., 1939-
710	Health Information Foundation, New York. An inventory of social and economic research in health.

001	66025530
020	080117325
050	QA935 .A73 1969
100	Armenàkas, Anthony E., 1924-
245	Free vibrations of circular cylindrical shells, by Anthony E. Armenàkas, Denos C. Gazis [and] George Herrmann.
250	[1st ed.]
260	Oxford, New York, Pergamon Press [1969]
300	xi, 211 p. illus. 29 cm.
650	Elastic plates and shells Tables, etc.
650	Cylinders Vibration.
700	Gazis, Denos C., 1930- joint author.

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*   NEWS MEDIA                                                  *
*                                                               *
*                                                               *
* FASAN, WALTER W. AND OTHERS                                   *
*                                                               *
* A UNIT FOR THE CLASSROOM TEACHER--THE                         *
* NEWSPAPER, A LIVING AND DYNAMIC TEXTBOOK.                     *
* (TITLE SUPPLIED)                                              *
*                                                               *
* 60, 21P., ED 21 27, EDRS PRICE MF-$0.09                       *
* HC-$0.23,                                                     *
*                                                               *
* ELEMENTARY EDUCATION, NEWS MEDIA, SLOW                        *
* LEARNERS, TEACHING GUIDES                                     *
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*    ACTION PROGRAMS (COMMUNITY)                                *
*                                                               *
*                                                               *
*                                                               *
*                                                               *
* A BIBLIOGRAPHY OF SELECTED REFERENCES ON THE                  *
* CULTURALLY DISADVANTAGED IN AMERICAN PUBLIC                   *
* EDUCATION.                                                    *
*                                                               *
* AUG[illegible], 12P., EDC[illegible], EDRS PRICE MF-$[illegible]                *
* HC-$[illegible],                                                  *
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HAVIGHURST, ROBERT J.

SOCIAL CLASS INFLUENCE ON LEARNING.

ACCULTURATION, CULTURALLY DISADVANTAGED, CURRICULUM, INSTRUCTIONAL MATERIALS, SOCIAL MOBILITY, TRAINING

IN AN ADDRESS DELIVERED AT A WORKSHOP OF THE GREAT CITIES IMPROVEMENT PROGRAM, IT WAS NOTED THAT TODAY'S SLUMS ARE BIGGER, STRATIFICATION MORE PREVALENT, AND THAT BECAUSE OF THESE FACTORS, ACCULTURATION HAS BEEN SOMEWHAT SLOWED DOWN. URBAN RENEWAL CANNOT BE SUCCESSFUL UNLESS SCHOOLS AND OTHER COMMUNITY AGENCIES ASSUME A MAJOR PART IN THE RENEWAL, AND SCHOOLS CANNOT FUNCTION PROPERLY UNLESS ATTENTION IS PAID TO THE PROBLEM OF STRUCTURE IN THE CITY. CREATION OF A "GLORIFIED" SLUM RESULTS WHEN PEOPLE ARE TAKEN OUT OF ONE BUILDING AND PUT IN ANOTHER IN THE NAME OF URBAN RENEWAL. A PROGRAM FOR CHILDREN IN THE EARLY ELEMENTARY GRADES COULD PROVIDE A BETTER READING PROGRAM, PROPERLY TRAINED TEACHERS, AND MATERIALS ADAPTED TO THEIR NEEDS. AN OBLIGATION OF SOCIETY IS TO PROVIDE WORK EXPERIENCE FOR SOME YOUNGSTERS AT THE AGES OF 13 OR 14. SIMPLE WORK SUCH AS GARDENING, ALLEY-CLEANING, BEACH UP-KEEP, SNOW REMOVAL COULD BE INSTITUTED TO IMPROVE COMMUNITY AREAS. EMPHASIS SHOULD BE PLACED ON PUNCTUALITY, COOPERATIVENESS AND A WILLINGNESS TO WORK. STUDENTS COULD COMBINE THEIR DAY WITH WORK AND BASIC CURRICULUM EXPERIENCE. JOBS COULD BE OBTAINED FOR THEM WHILE STILL IN SCHOOL IN BUSINESS OR INDUSTRY UNDER THE SCHOOL'S SUPERVISION, ENABLING THEM TO GRADUATE AT 16 TO FULL TIME EMPLOYMENT. IF SCHOOLS WILL MEET THE NEEDS OF THEIR CHILDREN, MANY OF TODAY'S PROBLEMS IN IN THE CITY SCHOOLS WOULD BE SOLVED.

AUG67, 16P., (4195 ; I-13), ED001001, EDRS PRICE MF-$0.09 HC-$0.68,

HIEVEMENT

UPGER, CARL L. RASSCHAERT, WILLIAM M.

A PLAN FOR EVALUATING MAJOR ACTIVITIES IN GREAT CITIES SCHOOL IMPROVEMENT PROGRAM.

ATTITUDES, COSTS, HEALTH SERVICES, INSTRUCTIONAL MATERIALS

THE GUIDE IS INTENDED TO ASSIST PROJECT DIRECTORS IN THEIR EFFORTS TO DEVELOP MORE SYSTEMATIC AND THOROUGH EVALUATION DESIGNS FOR THE GREAT CITIES SCHOOL IMPROVEMENT PROGRAM. MAJOR DIMENSIONS OF TEACHING-LEARNING, SCHOOL-COMMUNITY, AND PUPIL-PARENT-TEACHER ACTIVITIES ARE LISTED. MAJOR EVALUATION AREAS ARE IN PUPIL ACHIEVEMENT, IMPLEMENTED BY GROUP TESTING, CASE STUDIES, AND SCHOOL HOLDING POWER, AND ATTITUDE AND BEHAVIORAL CHANGES IN PUPILS, TEACHERS, AND PARENTS. OTHER IMPORTANT AREAS EVALUATED ARE SCHOOL COSTS, PROJECT STAFF ACHIEVEMENT, TEACHING MATERIALS, AND TECHNIQUE ACHIEVEMENT, SCHOOL-COMMUNITY RELATIONS, SCHOOL HEALTH SERVICES, AND IMPLICATIONS FOR CITY-WIDE EDUCATIONAL PROGRAM. TO ENABLE THE READER TO FOLLOW THE EVALUATION PLAN MORE EASILY, AN OUTLINE OF ACTIVITIES IS PRESENTED AS PART I. PART II IS THE EVALUATION PLAN ITSELF, AND IS ACTUALLY THE ORIGINAL OUTLINE EXPANDED TO INCLUDE TESTS, INSTRUMENTS FOR TESTING, AND SUGGESTED TREATMENT OF DATA FOR EACH OUTLINE AREA.

JUL62, 36P., (I-15), ED001002, EDRS PRICE MF-$0.09 HC-$1.28,

ACHIEVEMENT, CULTURALLY DISADVANTAGED, EVALUATION TECHNIQUES, SCHOOL COMMUNITY PROGRAMS, URBAN EDUCATION

CULTURALLY DISADVANTAGED

THE LANGUAGE ARTS PROJECT REPORT.

KORNHAUSER, LOUIS H.

SEP63, 22P., EDOC1003, EDRS PRICE MF-$0.09 HC-$0.88,

ELEMENTARY SCHOOLS, PARENT ATTITUDES, TEACHER WORKSHOPS

CULTURALLY DISADVANTAGED, KINDERGARTEN, LANGUAGE ENRICHMENT, SPEECH EDUCATION

A PROGRAM WAS INSTITUTED FOR IMPROVING EDUCATION FOR CULTURALLY DIFFERENT CHILDREN THROUGH INTENSIVE LANGUAGE ARTS INSTRUCTION USING SPECIAL TEACHERS SKILLED IN THE LANGUAGE ARTS. ITS PURPOSES WERE TO CREATE--AN IMPROVED ENVIRONMENT, INCREASED TEACHER EFFICIENCY, INCREASED INTEREST AND SUPPORT FROM PARENTS, AND A PROGRAM DESIGNED TO MEET THE NEED OF THE STUDENTS. REPORTS OF ACTIVITIES INCLUDE SPECIAL PROGRAMS FOR CHILDREN, WORKSHOPS AND SPECIAL ACTIVITIES FOR PARENTS, MEETING, AND DEMONSTRATIONS FOR TEACHERS. LARGE AMOUNTS OF DATA INDICATE SUCCESS.

CULTURALLY DISADVANTAGED

BASIC CONSIDERATIONS FOR EDUCATIONAL PLANNING FOR CHILDREN IN DEPRESSED URBAN AREAS.

MARBURGER, CARL L.

CULTURAL ENRICHMENT, EVALUATION TECHNIQUES, FAMILY SCHOOL RELATIONSHIP, FINANCIAL POLICY, PERSONNEL SELECTION, PROGRAM DEVELOPMENT, SECONDARY SCHOOLS

12JUL62, 38P., (I-5), ED001004, EDRS PRICE MF-$0.50 HC-$1.60,

AT A MEETING OF THE SUPERINTENDENTS AND BOARDS OF THE 14 LARGEST AMERICAN SCHOOL SYSTEMS, CONCERNS WERE SHARED ABOUT THE PROBLEMS OF EDUCATION IN LARGE URBAN AREAS. A CAREFUL STUDY OF CURRENT AND PROSPECTIVE YOUTH OPPORTUNITIES WAS MADE, AND FINDINGS ARE BEING IMPLEMENTED IN APPROPRIATE PROGRAMS IN EACH OF THE CITIES. THE PROBLEM OF LIMITED FINANCIAL RESOURCES LED TO A COOPERATIVE STUDY OF FISCAL POLICY. AN INTENSIVE ANALYSIS WAS MADE OF FACTORS WHICH INDICATE EDUCATIONAL DEPRIVATION - LOW ACHIEVEMENT, POOR ATTENDANCE, TRUANCY, AND HIGH FAILURE RATE. THE "CENTRAL HYPOTHESIS" WAS DEVELOPED WHICH STATES THAT THE PROBLEMS OF CHILDREN OF LIMITED BACKGROUNDS CAN BE EFFECTIVELY AND ECONOMICALLY SOLVED BY THE DEVELOPMENT OF A PROGRAM OF EDUCATION ADAPTED TO THEIR NEEDS, THE MODIFICATION IN ORGANIZATIONAL PATTERNS WITHIN THE SCHOOL, PROPER SELECTION AND UTILIZATION OF PERSONNEL, IMPROVED UTILIZATION OF INSTRUCTIONAL MATERIALS AND EQUIPMENT, AND INVOLVEMENT OF PARENTS AND COMMUNITY IN THE EDUCATIONAL PROGRAM. IT IS HOPED THAT A LARGE NUMBER OF CHILDREN ATTENDING PROJECT SCHOOLS WILL LEAVE THEM WITH POSITIVE SELF-IMAGES, HIGHER GOALS, GREATER SCHOLASTIC ACHIEVEMENT AND IMPROVED CITIZENSHIP, AND THAT THEY WILL BE MORE ADEQUATELY PREPARED FOR CONTINUING SCHOOL OR GOING TO WORK, THEREBY BEING MADE INDEPENDENT, RATHER THAN DEPENDENT CITIZENS. IN ADDITION TO THESE OBJECTIVES, THE DETROIT PROGRAM HAS THE FOLLOWING SPECIAL EMPHASES--(1) A PROGRAM OF TEACHER-SCHOOL-COMMUNITY IMPROVEMENT INVOLVING K-12 GRADE LEVELS, (2) REALISTIC FISCAL SUPPORT, AND (3) RECOGNITION THAT LONG-TERM PROGRAMS ARE NEEDED IF SIGNIFICANT CHANGE IS TO BE EFFECTED. BROAD DISCUSSION AND A PLAN FOR THE EVALUATION OF THE DETROIT PROJECT ARE INCLUDED.

COACHING TEACHERS

THE ROLE OF THE READING COORDINATOR.

MCNEIL, SHIRLEY

FEB65, 6P., (I-7), ED001005, EDRS PRICE MF-$0.09 HC-$0.28,

DEMONSTRATIONS (EDUCATIONAL), TESTING

COACHING TEACHERS, GUIDANCE, LANGUAGE ARTS, READING CONSULTANTS, RESPONSIBILITY

AN IMPORTANT PART OF THE READING COORDINATOR'S TASK IS CONCERNED WITH CORRECTIVE WORK IN THE LANGUAGE ARTS. COORDINATORS SERVE AS CONSULTANTS TO TEACHERS. IN ADDITION, THEY MAY BE EXPECTED TO WORK WITH SMALL GROUPS OF UNDER-ACHIEVERS TO MOTIVATE AND STIMULATE THEM TO MEET SCHOOL REQUIREMENTS WITH SOME DEGREE OF SUCCESS. WORK MAY INVOLVE GUIDANCE AND COUNSELING, THERAPEUTIC INSTRUCTION, PLANNING AND EVALUATING OF PROGRESS AND ACHIEVEMENT, AND DEVELOPING NEW MATERIALS AS NEEDED. THROUGH CONFERENCES, DEMONSTRATION LESSONS, IN-SERVICE MEETINGS AND DISCUSSIONS, THE COORDINATOR WILL ASSIST CLASSROOM TEACHERS WITH METHODS AND MATERIALS REQUESTED. WORK SHOULD BE WITH THE ENTIRE FACULTY. FROM STUDENT RECORDS, THE COORDINATOR WILL GET A "PICTURE" OF THE CHILD, AND WILL HELP ADMINISTER TESTS TO DETERMINE DEFICIENCIES. A PROGRAM OF INSTRUCTION SHOULD BE PROVIDED TO MEET THE NEEDS OF CULTURALLY DIFFERENT YOUTH, TO HELP EACH CHILD ATTAIN SOME MEASURES OF SUCCESS, INSTILL CONFIDENCE IN PUPILS, AND HELP TEACHERS ENRICH THEIR EXPERIMENTAL BACKGROUNDS. RELATED DUTIES INCLUDE MAINTAINING LIAISON WITH SPEECH TEACHERS AND INFORMING PARENTS OF THE SPECIAL HELP GIVEN TO THE CHILDREN. THE PROGRAM SHOULD BE HOUSED IN A PERMANENT ROOM WHERE ALL BOOKS, MAGAZINES AND OTHER NECESSARY TEACHING AIDS AND PROFESSIONAL LITERATURE WILL BE AVAILABLE.

CULTURAL ENRICHMENT

POTTER, LOUIS A.

HEIGHTS PROGRAM.

SERAC, ICP., ED061606, EDRS PRICE MF-$0.09 HC-$0.80,

ACHIEVEMENT, LANGUAGE ARTS, SCHOOL COMMUNITY COOPERATION, SCHOOL IMPROVEMENT

CULTURAL ENRICHMENT, CULTURALLY DISADVANTAGED, INSERVICE TEACHER EDUCATION, TALENT DEVELOPMENT

CAPITAL OUTLAY (FOR FIXED ASSETS)

MCLURE, WILLIAM P.

THE STRUCTURE OF EDUCATIONAL COSTS IN THE GREAT CITIES.

07AUG64, 57P., ED001009, EDRS PRICE MF-$0.09 HC-$2.28,

COMPARATIVE ANALYSIS, STUDENT TEACHER RATIO

CAPITAL OUTLAY (FOR FIXED ASSETS), COSTS, EDUCATIONAL FINANCE, ELEMENTARY SCHOOLS, TEACHER SALARIES

THE ATTEMPT IS MADE TO DEVELOP A STRUCTURE OF COSTS WHICH EXPRESSES THE FUNCTIONAL COMPONENTS OF 12 GREAT CITIES PROGRAMS (BALTIMORE, BOSTON, CHICAGO, CLEVELAND, DETROIT, HOUSTON, LOS ANGELES. MILWAUKEE, NEW YORK, PHILADELPHIA, PITTSBURGH, AND ST. LOUIS). THE MOST FUNDAMENTAL COMPONENT IS THE INSTRUCTIONAL UNIT, DEFINED AS A FULL-TIME TEACHER FOR A SPECIFIED TEACHING AREA FOR A GIVEN NUMBER OF PUPILS. ADMINISTRATION AND SPECIALIZED SERVICES, SUCH AS COUNSELING AND EQUIPMENT, ARE EVALUATED IN TERMS OF SUPPORT TO THE TEACHER. BASIC COSTS REVEAL THAT THE AVERAGE COST PER PUPIL IN ELEMENTARY SCHOOLS RANGES FROM $185 IN HOUSTON TO $297 IN NEW YORK. THE AVERAGE COST FOR ALL OF THE CITIES

ELEMENTARY EDUCATION

CIOTTI, RITA KRAVITZ, IDA

TECHNIQUES FOR THE TEACHING OF SPELLING.

7P., (318), ED001010, EDRS PRICE MF-$0.09 HC-$0.32,

ELEMENTARY EDUCATION, INSTRUCTIONAL AIDS, LANGUAGE ARTS, SPELLING, TEACHING TECHNIQUES

A TECHNIQUE FOR THE TEACHING OF SPELLING AT THE ELEMENTARY LEVEL IS PRESENTED WHICH INCLUDES KINESTHETIC, AUDITORY, AND VISUAL INVOLVEMENT. EMPHASIS IS PLACED UPON TOTAL WORD RECALL, UNDERSTANDING OF THE WORD'S MEANING, AND USE OF THE WORDS IN CONTEXTUAL SENTENCES. STUDY SHEETS ARE PREPARED BEFOREHAND WITH THE WORDS AND SENTENCES ON THEM WHICH MEET HANDWRITING SPECIFICATIONS. SUGGESTIONS ARE MADE FOR SECOND THROUGH THE SIXTH GRADE LEVEL.

COMMUNITY EDUCATION

BALLEN, LOUIS R. AND OTHERS

FORD PROJECTIONS--THE FORD FOUNDATION PROJECT SCHOOLS NEWSLETTER.

DEC60, ED001011,

MANY SHORT ARTICLES DESCRIBING AND EVALUATING WHAT WAS ACCOMPLISHED DURING THE FIRST SEVERAL MONTHS OF THE FORD FOUNDATION GREAT CITIES IMPROVEMENT PROGRAM IN PHILADELPHIA, PENNSYLVANIA ARE INCLUDED. SEVERAL SHORT ARTICLES CONCERNING SPECIFIC ACTIVITIES OF THE STAFF, TEACHERS, PARENTS, AND PUPILS INVOLVED SUPPLEMENT THE EVALUATION. THE ARTICLES WERE INTENDED TO INFORM THE SCHOOL AND COMMUNITY OF SOME OF THE THINGS THAT HAD TRANSPIRED AND SOME WHICH WERE PROJECTED FOR OCCURENCE IN THE FUTURE.

ELEMENTARY EDUCATION

CIOTTI, RITA KRAVITZ, IDA

INDEPENDENT READING ACTIVITIES

FEB62, 24P , ED001012, EDRS PRICE MF-$0 09 HC-$1 00,

ELEMENTARY EDUCATION, INDEPENDENT READING, INSTRUCTIONAL AIDS, TEACHING GUIDES, TEACHING METHODS

IT WAS DETERMINED THAT INDEPENDENT READING ACTIVITIES SHOULD BASICALLY GROW FROM AND BE RELATED TO THE READING MATERIALS BEING USED IN THE DEVELOPMENTAL LESSONS. THEY MAY ALSO INCLUDE MATERIALS OF A NATURE SO AS TO PROVIDE WORTHWHILE PRACTICE, CONCEPT BUILDING, OR ENRICHMENT LEARNINGS. MANY RECOMMENDED EXAMPLES OF SUITABLE READING ACTIVITIES AT VARIED LEVELS OF ELEMENTARY EDUCATION (I E. PRIMARY LEVEL AND INTERMEDIATE LEVEL) ARE GIVEN

COMMUNITY INVOLVEMENT

BEACON PROGRAM

60, 459 , ED001013, EDRS
PRICE MF-$0.09 HC-$1.92.

EDUCATIONAL OBJECTIVES, ELEMENTARY EDUCATION, FAMILY SCHOOL RELATIONSHIP, SCHOOL IMPROVEMENT, COMMUNITY INVOLVEMENT, CULTURAL ENRICHMENT, CULTURALLY DISADVANTAGED, CURRICULUM PLANNING

THE GREAT CITIES SCHOOL IMPROVEMENT PROGRAM AT LUDLOW SCHOOL, IN A PREDOMINANTLY PUERTO RICAN AND NEGRO NEIGHBORHOOD, HAS BEEN LABLED "BEACON" (BE A CITIZEN OF OUR NATION). IT ENDEAVORS TO ENRICH THE EDUCATIONAL EXPERIENCE OF THE STUDENTS THEREBY DEVELOPING THEIR MAXIMUM POTENTIALS FOR ACHIEVEMENT, AND CONTRIBUTING TO THEIR USEFULNESS AS CITIZENS. SPECIFIC PROGRAMS AND ACTIVITIES HAVE BEEN DEFINED WITH THE OBJECTIVES OF INVOLVING THE STUDENTS, TEACHERS, PARENTS, AND COMMUNITY. EFFORT WILL BE MADE FOR EACH CHILD TO HAVE THE SAME TEACHER FOR THE FIRST 2 YEARS OF SCHOOL FOR PURPOSES OF THE MORE ACCURATE OBSERVATION AND EVALUATION OF THE CHILD'S POTENTIAL. EXTENSIVE USE OF STANDARDIZED TESTS WILL AID IN THIS AREA. IN-SERVICE TRAINING OF STAFF MEMBERS WILL ENABLE THEM TO DO A MORE EFFECTIVE JOB. REEVALUATION OF THE TOTAL CURRICULUM WILL PROVIDE FOR INTELLIGENT CHANGES WHERE SUCH ARE DEEMED ADVISABLE. A THREE MEMBER VOLUNTARY COMMITTEE WILL PLAN FOR A 3

APPENDIX IV

TENTATIVE LISTING OF SOME EXISTING
(or soon-to-be-existing)

DATA BASES SUITABLE FOR

GENERAL REFERENCE AND BIBLIOGRAPHY

March 1970

New York Times Index (since 1 Jan 1968)
New York Times Index plus list of Descriptors

Dissertation Abstracts (DATRIX Service)
(DA are now doing market research with a view to selling the tapes, they have recently compiled a set of programs to permit subject retrieval, and are in process of creating a cumulative index to volumes 1-29.)

LC MARC Tapes.

BNB

Books in Print
Paperback Books in Print

Biological Abstracts (plus their Bioresearch and Biosystematic Indexes and a new service called BA Previews--a quick listing in advance of the main file)

Chemical Abstracts (several services are now being tested at UC Riverside)

Psychological Abstracts (should be available on tape by the end of this year, with a thesaurus to follow in 1971)

U. S. Census of 1970

County and City Data Book (from U. S. Bureau of the Census)

Statistical Abstract of the U.S. (from U. S. Bureau of the Census)

Research Centers Directory

Human Relations Area Files

College Blue Book

Encyclopedia of Organizations.

Christian Science Monitor Index

H. W. Wilson Publications (various)

University of California Union Catalog Supplement (UCUCS-now nearing completion at the Institute of Library Research, Berkeley)

Webster's 7th Collegiate Dictionary

Randon House Dictionary