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ABSTRACT

With the aid of a grant from the Council on Library Resources, The New York Public Library's Research Libraries conducted an experiment lasting from July 1971 through March 1972. The object of the experiment, which was in three parts or phases, was to determine the acceptability of microfilm as a substitute for the public card catalog, the new book catalog, and the authority file for the new book catalog. Because many of the cards in the heavily-used public catalog are badly deteriorated and in need of replacement, various alternatives, including microfilming and book publication, have been studied. Part I of the experiment was designed to test the feasibility of the first of these alternatives. Parts II and III, involving the use of microfilm as a substitute for the authority file and the new book catalog, as it related to the Processing Division, are reported on by the Chief of that Division. Part III also involved public use of The Research Libraries new book catalog on microfilm. A report on this part forms the final portion of the report. (Author)

The Use of Microfilm in Relation to the Retrospective and Prospective Catalogs of The Research Libraries of The New York Public Library: A Report to the Council on Library Resources (CLR Grant No. 516)

June 1972

Introduction & General Summary

With the aid of a grant from the Council on Library Resources, The New York Public Library's Research Libraries conducted an experiment lasting from July 1971 through March 1972. The object of the experiment, which was in three parts or phases*, was to determine the acceptability of microfilm as a substitute for the public card catalog, the new book catalog, and the authority file for the new book catalog. Because many of the cards in the heavily-used public catalog are badly deteriorated and in need of replacement, various alternatives, including microfilming and book publication, have been studied. Part I of the experiment was designed to test the feasibility of the first of these alternatives. Parts II and III, involving the use of microfilm as a substitute for the authority file and the new book catalog, as it related to the Processing Division, are reported on by the Chief of that Division. Part III also involved public use of The Research Libraries new book catalog on microfilm. A report on this part forms the final portion of the report.

Any evaluation of the results of the experiment must be made with careful reference to the special needs and problems of The Research Libraries. For another institution, such an experiment might well result in a quite different set of recommendations. For example, a library with a less heterogeneous readership and with a public catalog which has suffered less through time and heavy use might find microfilm a more acceptable substitute than would be the case for The Research Libraries. On the other hand, The Research Libraries, because of their acute space problems and the rapid growth of their new book catalog, probably have greater need than most for a substitute such as microfilm would provide for the authority file.

The question of whether a catalog such as The Research Libraries' new book catalog is more useful in book form or in microform can be answered perhaps more clearly than the questions dealt with in the first two parts of the experiment. There would appear to be general agreement that a catalog in book format is easier and more convenient to use. For The Research Libraries, however, the factors of space and production costs must be taken into account. If they should eventually loom so large as to make continued publication of the catalog in book form impractical, the experiment demonstrates the feasibility of using microfilm as an alternative.

The Research Libraries are grateful to the Council on Library Resources for making this experiment possible. It has answered questions which have a most important relationship to the preservation and continued usefulness of The Research Libraries' catalogs. Insofar as libraries share similar problems wherever they may be, the experiment contributes to a fund of knowledge upon which all may draw.

*In the reports which follow, the words "part" and "phase" are used interchangeably.

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Report on Microfilm Catalog Experiment
(CLR Grant No. 516)

Part I: The Use of Microfilm as a Replacement for Part of the Public Catalog

Submitted by:
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INTRODUCTION

The following report was prepared at the request of the Chief, General Research Services, The New York Public Library, by the Microfilm Catalog Assistant, General Research and Humanities Division, The New York Public Library. It is intended to form part of the basis of a report to the Council on Library Resources of an experiment conducted in connection with that group July 26 to December 31, 1971. The report is based on activities recorded in the "Diary of the Use of the Microfilm Catalog in The Research Libraries", a daily record of each event related to the experiment or the Microfilm Catalog Assistant.

BACKGROUND AND PURPOSE

In 1971 The Research Libraries of The New York Public Library began the change from a traditional cataloging process to one using a computer and adapted to systems used by the Library of Congress. For various reasons this necessitated the creation of two catalogs: a "retrospective" catalog of all holdings received before a specified cutoff date and cataloged according to the old procedures, and a "prospective" catalog of entries cataloged using the new procedures. After the cutoff date all new entries, including corrections and updating of entries in the "retrospective" catalog, were to go into the "prospective" catalog.

Thus the 10,000-tray Public Catalog would be "frozen", and no new entries added after the cutoff date. Some of the cards are so old (in some cases going back to 1857) that they are physically deteriorating. Therefore, it was decided that the "retrospective" catalog should be preserved in some more permanent form, either in book form, or on microfilm. Microfilm is less expensive to produce than books, but until recently the technical problems involved made the use of a microfilm catalog out of the question. However, the development of the Memorex 1642 Viewer, which uses cassettes instead of having to be threaded by hand and which has been found to be sturdier than other microfilm viewers, made the use of a microfilm system seem feasible. It was therefore decided to test this possibility by installing Memorex Viewers in the Public Catalog on an experimental basis.

The purpose of the experiment was to test the usefulness of microfilm reproduction of a segment of the Public Catalog in The Research Libraries of The New York Public Library. Among the factors to be considered are user acceptability, mechanical feasibility of the microfilm readers, and the means by which this service is to be administered by the staff. It was thus very much open-ended in terms of the specific problems to be investigated, as well as the methods of investigation to be employed.

METHODOLOGY

Equipment

Two Memorex 1642 Viewers, designed to use 16mm film mounted on cassettes and turned by a hand crank, were installed in the Public Catalog, Room 315 of the Central Building. They rested on tables used for filling out callslips, situated beside the catalog drawers.

Originally 20 catalog trays were filmed in an area thought to be representative of the entire catalog (Deutschland C - Dickson, I), and divided between 2 cassettes. Later the next eleven trays (to Dilt) were filmed, making a third cassette, and a fourth was added from World War, 1939-1945 to World War, 1939-45--Evacuations (9 trays). The machines were located in the corner of the room next to the "D's". The drawers were taken out and stored in an area accessible to staff only, close enough to be consulted if necessary. No "rehabilitation" of old cards was done prior to filming, and it was assumed that some classmarks (call numbers) barely visible on cards might be obscure on film.

Signs were installed over the empty spaces left by the drawers. The one in the "D's" read: "Catalog cards for Deutschland C to Dickson, I (later Dilt) are available on microfilm only. For use of this part of catalog, consult technical assistant at microfilm reader in adjacent area, or librarian at Information Desk." The sign in the "W's" read almost the same, substituting "World War, 1939-45 to World War, 1939-45--Evacuations" in the appropriate place and "northeast corner" for "adjacent area."

Personnel

The machines were under the supervision of a Library Technical Assistant I, known as the Microfilm Catalog Assistant, whose duties were to "assist users of the microfilm catalog", "maintain the microfilm readers and cassettes in working order", consult the cards themselves if necessary to determine classmarks, and record the incidents related to the experiment in a diary. On lunch hours and coffee breaks, the assistant was relieved by clerks from the division. The catalog assistant had had no prior training in research methods, and was not a librarian. His previous experience had been as a catalog-card filer, so he was familiar with the filing system of the cards recorded on film. Relief personnel had not had this training.

In addition the assistant found himself answering routine questions not requiring the assistance of a librarian, locating cards in the card catalog for readers (and occasionally librarians) confused by the complex card-filing rules, and referring readers to the Information Desk nearby (staffed by librarians), other divisions of The Research Libraries, and nearby branch libraries. Other duties were assigned to him from time to time, both filing duties related to his previous training, and clerical duties related to the experiment.

Administratively, the assistant was part of the General Research & Humanities Division, the division in charge of the Public Catalog. However, most orders and arrangements related to the experiment came to him through the Chief of General Research Services, whose jurisdiction includes the General Research & Humanities Division, or directly from persons in the Photographic Services and the Processing Division. The Library's Microform Reading Room, in charge of older-model machines for reading books and newspapers, had no direct or advisory contact with the assistant or the experiment.

All filming of cards was done by The Library's Photographic Services. Preparation of cards for filming was done by the assistant and the Filing Section of the Processing Division.

Procedures

After the machines were set up and the drawers taken away, the assistant or a relief person stood or sat close to the machines at all times The Library was open. No attempt was made to solicit readers to use or comment on the machines, though staff members were notified of the experiment through the Library's Staff News, and some staff were solicited to give opinions and observations. Everyone who needed an entry in the part of the catalog on film had to use the machines and was noticed and nearly always approached by the assistant or relief person.

No standard questions were used and readers were generally not asked their opinion of the machines or the experiment when they used the machines. However, the nature and purpose of the experiment was explained to most readers using semi-standardized descriptions, and comments by readers made during conversations with the assistant or relief person were recorded afterwards. Readers generally knew they were participating in an experiment but were not told their comments would be recorded. Some staff were told the latter.

During part of the experiment, a record of the number of readers who glanced at the sign and/or the machines and then left was kept. For all readers notation was made of their approximate age: "undergraduate" (under 22), "graduate" (22 to 35), "middle-age" (35 to 65), "older" (over 65), as estimated by the assistant or relief person. No record was kept of name, race, sex, or other characteristics of readers. Original plans were to estimate relative amount of library experience of readers, but this proved unfeasible except in special cases where evidence was inadvertently provided by the reader. The reader's business with The Library was interrupted as little as possible by data-gathering for the experiment and the latter was kept as informal and simple as possible.

Conversations and incidents related to the experiment and/or the duties of the assistant were recorded in the diary as soon after they took place as was convenient, based on the memory of the assistant or relief person. Other observations on the experiment were also included in the diary by the catalog assistant.

It should be pointed out that no control experiment testing the feasibility of retrospective book catalogs for comparison with the results of this experiment has as yet been conducted by The New York Public Library. Most of the readers who commented on the experiment were told that the planned alternative to the microfilm was a book catalog and some that the card catalog would eventually be eliminated altogether in the Public Catalog.

RESULTS

As a result of the five-month experience with microfilmed portions of the Public Catalog, several sets of findings can be reported. They can be loosely classed as "technical", "social", and "administrative".

Technical Problems

The "technical" problems were the ones which the experiment was designed to illuminate, so the findings in this category can be stated with less caution than in the other categories.

Machinery. The cassettes were fragile for the use they are likely to receive by the public. One was dropped accidentally in the course of the experiment from a height about equal to the top of a desk. The hinges were both broken so that the cassette would not close tightly. It was replaced at a cost of $1.25 per cassette. The public did not have much of a chance to drop anything, since the cassettes were usually either already in the machines or inserted by the assistant.

Light bulbs had to be replaced once in the first machine (after 3½ months) and twice in the second. Once in each machine the chain for the focus knob came loose and had to be put back into place.

The machines were plugged into sockets connected to the lights used at the tables in the Public Catalog. The sockets were loose enough to cause the machines two or three times not to turn on when the cassette was pushed in.

Photography--Margins. At the very beginning it was found that in one cassette the film was so far over on the screen that the left margin was hidden. This was corrected by enlarging the window of the cassette slightly and by filming subsequent cassettes with a narrower space between the two columns of cards.

Focus. One of the biggest stumbling blocks to adoption of the microfilm permanently by The Library seemed to be the focus problem. Sometimes part of the screen was in focus; sometimes all of it was in focus for up to 40 seconds and then it would "jump" out of focus, or vice-versa. Sometimes it would be in focus until the crank was turned or as soon as it was touched. Personnel in the Photographic Services of The Library believe that the problem can be traced to the silver emulsion used in some of the film, which absorbs heat from the light bulb. However, if a solution is not found, the focus problem would be a major obstacle to the convenient use of a catalog on microfilm.

Rehabilitation. Before filming for either a book or microfilm, old cards will have to be rehabilitated. Old, heavily-used cards have

darkened corners from decades of users' fingers. The edges may show up so brightly on the negative film that classmarks are difficult to read. Photographic Services has been able to overcome most of the problem here by varying filming techniques and type of film used, but at the cost of dulling the contrast of the images on the screen. On other cards the corners have broken off, and new cards will have to be made using cards from the Official Catalogs. In a few cases pencilled entries are all but invisible and would have to be corrected in the same way. A minor question also is what to do about the small percentage of cards where information primarily for staff use appears on the back of the card.

Use - The Searching Problem. Though some readers who used the machines for the first time said it was faster than the card catalog, nearly everyone who had experience using both for a while agreed that it takes longer to find an entry in the microfilm catalog than in the card catalog. Of course, most of the "experienced" people still had biases toward cards, and most still had not had a great deal of practice finding entries on microfilm. However, even one of the most vocal proponents of the microfilm said he did not claim it was faster, and the assistant, who had five months of practice finding entries on film, still thought it was slower than cards. No systematic comparison with books was made.

There are several possible reasons for this difference. First, whereas in a card catalog the tops of cards can be seen while flipping through them, it is necessary to stop periodically to check one's location while searching for an entry on film. Second, a cassette has ten times the number of entries in a tray: it is difficult to tell how far to turn the crank before stopping. The usual tendency for readers using it for the first time is to go too slowly, checking every dozen cards or so even when they're starting at Dewey and want to go to Dial, 4,000 entries away. Faster users still have trouble guessing when to stop, and readers in general seem to have trouble figuring out the difference between main and added entries quickly enough to tell where they are. Third, the nature of microfilm is such that, regardless of how fast the crank is turned, one still has to cover every inch of information while searching. With a card or book, one can start anywhere in the middle or the end, skip whole areas with a flip of the finger, and deal most of the time with only the edges of the cards or pages.

The Browsing Problem. Persons who need to "browse"--i.e. check a large set of entries to decide which, if any, may be of use to them--find that they take more time and are more likely to be confused than when using a card catalog. One reason for this may be the fact that guide cards (which contained instructions for the manner of filing) were not filmed; it may also be due in part to lack of practice on the part of the user. On the other hand, more than one entry at a time can be seen with a film--and especially a book--catalog, which some readers say compensates to some degree. This problem is important, since "browsers" include scholars checking for an overview of the Library's holdings on a particular subject, catalogers comparing editions, readers unsure of the exact form of an entry acting on hunches, and others with serious purposes. Again, no comparison with books was made.

The Theft Problem. Once during the experiment a fuse was found missing; the cap holding it in the machines is at the back (and therefore on one machine out of sight of the assistant nearly all the time), and clearly marked "fuse" with an arrow indicating how to remove the cap. A dab of paint might be all that is needed to avoid aiding someone who collects free fuses. The cassettes pose a more dangerous problem: they fit easily into a coat pocket or large purse. What's more, the film can be stolen out of the cassette--or even replaced, as one vicarious prankster has pointed out--and the cassette returned with no one the wiser for perhaps a long time. It was pointed out that it is easier to know what to replace if it is a large area than if just a few cards, but continuous replacement might be costly. Preventive measures such as magnetic tape placed inside with a detection device, or some sort of chain attached to each cassette or some sort of checkout system, might be costly or inconvenient to readers, or both.

Sight Problems. Quite a few readers complain of dizziness or headaches, some even after only a few turns of the crank. Others predict eyestrain or fatigue from more than a few minutes of use. One librarian from another division says a regular reader there claims to be unable to use their microfilm machines at all. The reader wears very thick glasses. None of these possibilities was investigated further, so there is as yet no evidence to indicate whether any of them might pose a major stumbling block to adoption of the microfilm catalog.

The Queuing Problem. It was thought at the beginning that tying up ten trays in one cassette would mean people would be standing in line to use the machines. Since only three or four people a day used the machines--sometimes none, at the Thanksgiving "rush" no more than eleven--people were kept waiting only a handful of times during the course of the experiment. Never was more than one person waiting at one time, and only once was the person kept waiting more than a few minutes; in that instance the reader was able to look up entries elsewhere while waiting. It is not anticipated that queuing would be a problem if duplicates are made for heavily-used cassettes and a sufficient number of machines are provided. (Incidentally, it will probably be necessary to have at least one machine by the telephone reference service and several at the Information Desk. One librarian with a telephone call was delayed by a reader who refused to yield the machine, and ended up "cheating" by using the cards. It has been suggested that machines--and perhaps cassettes--could be put in the special study rooms for scholars.)

Social Problems

"Social" problems were a secondary interest, but due to the informal methods of data collection, results here must be interpreted very cautiously. For one thing, the sample of opinion was slightly biased due to the ability of some scholars doing long-term research to postpone using the section of the catalog

included in the experiment until after the experiment was over, and the ability of librarians to bypass the machines and go directly to the place where the drawers were hidden. A few cases of each were noted by the catalog assistant, but it is obviously impossible to tell how many others there were. For another thing, some aspects of the experiment which affected readers would not be present were the entire catalog to be filmed, e.g. older cards with entries difficult to read would be rehabilitated.

Use. Ability to use the machines varied by age, previous experience with similar machines, previous library experience, and attitude toward the experiment. Older readers tended not to "play" with the machines as often as younger ones when no one seemed nearby, or to be as willing and able to use the machines after being shown how bythe assistant. Younger readers not infrequently would already be operating it by the time the assistant came over to them. Readers who had used microfilm or cassette-operated machines before had little difficulty teaching themselves how to use the machine. Those with long experience using card catalogs were often frustrated by the time factor and could become confused by the filing order of the entries even though it was the same as when the entries were on cards. Those opposed to the experiment had more difficulty adapting to the machines' problems; in a few cases they would interrupt the assistant as he tried to explain how to cope with them. Very few people, even those who figured out all other aspects of the machine's operation, could eject the cassette without instruction.

It should be noted that, due to the way the experiment was conducted, there were many things which the reader was not left to puzzle out on his own. He was told to consult the assistant before using the machine, so the assistant found it difficult not simply to find the proper cassette himself and insert it. A few times he would even find the entry for the reader, or at least help when the reader appeared lost. Thus a whole set of problems which might have caused the reader trouble (e.g. which way to insert the cassette) never came up for most readers.

Attitudes: Scholars and Regular Users. Those for whom the Library was designed and those to whom the Library caters are precisely the persons who expressed the most persistent opposition to the machines. In terms of numbers, the group was small, and the vocal opposition within it even smaller, but their criticisms and problems were important--and sometimes dramatic. These are the readers who do "serious browsing" through the catalog, who sit for long periods of time with a single set of entries comparing editions or taking an overview of a subject, who skip back and forth within a large group of entries to follow a "hunch" as to how a book may be entered. These are the readers who complain that the time factor significantly handicaps them in their work and who voice stronger complaints of inconvenience to the administrative office. Some scholars and regular users found the microfilm catalog acceptable or even desirable, some merely asked about it in order to be prepared if it were adopted, but those who needed it for their own use at the time generally found it undesirable.

Attitudes: Staff. These users were somewhat less opposed than the scholars. Librarian-level staff from public divisions (especially librarians in the Public Catalog) tended to be strongly opposed, while those in Preparation Services were more often neutral or in fav . This may be due to the fact that Preparation Services is more direct affected

by mechanization of the cataloging process and are having to make major adjustments anyway, whereas this experiment was perhaps the first aspect of a mechanized cataloging process that directly affected a public service division. In any case, criticism from both sources ranged all the way from simple expressions of stubbornness to very sophisticated and relevant comments. Young librarians tended to favor strongly, older ones a little more likely to oppose than favor.

Non-librarians had less to say one way or the other, and, surprisingly enough, though the head of the section had no comment, most of the members of the Filing Section seemed to like the machines. No one directly connected with the experiment (Photographic Services, Systems Analysis and Data Processing Office, assistant and relief persons, General Research Services, Preparation Services) expressed outright opposition to the machines, but only a few appeared strongly favorable; the rest appeared to prefer making sure the experiment ran well and reserving judgment until the results were in. The assistant fell into the latter category. Microform Reading Room was never officially consulted for an opinion. In general, Library staff were more opinionated than other groups, and more often than not against the idea of putting the catalog on film, whether or not they knew the alternative was a book.

Attitudes: Others. Businessmen tended to be more curious and receptive than others the same age. Graduate students split among those in favor, those neutral, and those opposed.

Attitudes: In General. Most readers had little to say about the machines but in general attitudes tended to go along in the same direction as ability to use the machine--especially with regard to age. Younger people tended to feel at home with the machines, and, of course, they are the scholars and librarians of the future. If the criticisms raised by the older readers can be answered or prove to be unimportant, public opposition to the machines can be expected to decrease as older readers are replaced by younger ones, simply because younger readers have had more experience with microfilm and cassettes in other areas of their lives.

Administrative Problems

"Administrative" problems which came up during the experiment were never crucial to the decision whether to institute the microfilm on a permanent basis, but they did indicate possible areas to be explored if the decision is favorable--and, in some cases, areas which might be explored regardless of what the decision is.

The Catalog Assistant. Since only 20 to 40 of the nearly 10,000 trays in the Public Catalog were on microfilm, the number of persons actually using the machines was only about 3 or 4 a day during non-peak periods. Therefore, the assistant found most of the questions asked were either general questions about the machines by curious readers not using the machine, routine questions on call slip procedure or how to find an entry or how to use the reference books shelved close to where the assistant was stationed, and a few reference questions referred to the Information Desk.

The overwhelming amount of information given by the assistant, either in answer to specific questions or volunteered where it seemed appropriate, concerned the following topics: the nature of the experiment and its relation to the automation of the cataloging process, location of reference books in the Public Catalog room, how to fill out a call slip correctly (including a few routine "verifies"), how to locate cards in the card catalog (especially periodical titles beginning with the same word as a subject), the nature of the supplementary catalog. The assistant was able to help librarians by finding entries filed in the card catalog according to unusual rules, correcting filing errors brought to his attention which otherwise would have had to wait until Filing Section was notified, and occasionally explaining the reason for a strange-looking but correct filing order. In a few cases the assistant was able to help a reader who had already seen one or more librarians but not been able to get a satisfactory answer. Sometimes the assistant was able to spot readers who appeared lost or confused and approach them with "Can I help you?" Sometimes the assistant would be seen behind the Information Desk and taken for a librarian; usually he found it unnecessary to refer the reader to someone else. In some cases in which the assistant referred a question to the desk, he told the reader how to formulate the question and sometimes even predicted the answer ("Tell them you're working on -----. They may refer you to -----.") In all cases the assistant felt unhurried (no lines of people as may be at the Information Desk) and could ask clarifying questions, follow hunches, and in other ways give readers individual attention often impossible to get from other staff. It may be that some readers asked questions of the assistant who would never have gone to the Information Desk, though there is no evidence to show this.

The usual problems of intra and inter-divisional relations expected in a large organization were complicated by the experimental nature of the project. Relations between the assistant and the librarians, especially regarding referrals and confirmation of answers given to readers, were easy to work out. However, at times there were borderline questions in which the assistant had to judge whether he could give a satisfactory answer--usually such answers were accompanied with a referral to the desk. In addition, often when the assistant gave a guarded answer punctuated with "ask the librarian to make sure", the reader would simply take the assistant's answer as correct and neglect to ask the librarian.

A few cases did arise in which conflicting orders from different supervisors had to be resolved. Usually the assistant simply made a temporary decision in consultation with whoever seemed most knowledgeable on the question, and a permanent decision (often reversing it) would catch up later after confirmation by the Chief of General Research Services

Relief. By providing relief for the assistant, the General Research & Humanities Division lost over 1½ man hours per day to the experiment. Training consisted of a single explanation by the assistant at the beginning of the experiment, plus a few comments from time to time when, for example, a visit by someone from Photographic Services or Memorex was expected. Communication between the assistant and the relief personnel was minimal, primarily because they worked, of course, at different times. Experience gained by the assistant and resulting changes in emphasis or

recording techniques were not transmitted as a rule to relief, and vice versa. Consequently, some benefits gained from varying the person attending the machines were not gained.

Memorex. The repairman was called only three or four times during the five-month period. Twice the focus problem was brought to his attention, and once the fact that one of the machines did not light. In each case the repairman claimed that the problem was caused by the fact that the machines are plugged into a socket shared with a light bulb, not provided with a socket of their own. Library personnel pointed out that the intensity of the light--the only factor which would be affected by a faulty electrical connection--did not vary when the image went out of focus, and the incident in which one machine failed to light was traced to the loss of a fuse. The Library did not change the electrical connections, and a few times the machines failed to light until the assistant adjusted the plugs in the sockets, but none of the problems brought to the attention of the repairman and blamed by him on the connections later proved traceable to that factor.

Flare Spaces. When the final two cassettes were filmed, flare spaces equal to about ten cards were left everytime a drawer was completed, and a "target" (sign) indicating the next entry was inserted. Two or three times within each drawer, that is about every 500 cards, there was another flare space, with no target. The spaces were inserted for the convenience of the Photographic Services,and the targets were thought to be of possible help to readers. In practice, they rarely were helpful, since even the slowest readers turned the crank too fast to see the targets. As a matter of fact, the flare spaces caused a few readers to think the reel was over when they had come to one of those spaces.

Physical Arrangements. The scope of the experiment did not permit the study of how large numbers of machines and cassettes would be installed and maintained. Presumably, after the card catalog is removed, there would be sufficient space for several machines to be placed on each table and several sets of cassettes in racks against the wall. However they would be arranged, it was assumed that page and clerk staff now engaged in reshelving card catalog trays would be able to handle similar duties in relation to cassettes, and could easily perform routine maintenance on the machines. Checkout systems, mentioned before, could not be tested.

CONCLUSIONS

Any decision by The New York Public Library to put the retrospective public catalog on microfilm will be based on information in at least two areas beyond the scope of this report: feasibility and desirability of book catalogs as an alternative to microfilm, and financial aspects of each of the alternatives. Therefore this report can draw no final conclusions but simply outline the pros and cons of microfilm discovered during the experiment and note areas which need further study.

It appears as though most of the technical problems connected with film can be answered, but there are two--the searching and browsing problems--which cannot be overcome using the machines tested in the experiment. If other microfilm machines are developed which cut down searching and browsing time without too large an increase in cost, then the most important technical problem connected with microfilm will be reduced. However, motorized machines and machines with index numbers or special call-up devices may have their own problems. Further experimentation--such as the test of motorized Memorex machines in the Cataloging Branch--would be necessary for each type of machine.

As people become used to the machines, and as older readers are replaced by younger ones, problems connected with user acceptability can be expected to decrease over time. However, scholars and regular users can be expected to continue at much the same rate their complaints that the searching and browsing problems cost too much in time and effort. Another problem has not been adequately researched in this experiment: the possibility that readers can become "dizzy" or even "sick" from using the machines for a long time or that their eyesight may be so bad that they cannot read the entries at all. Research would have to establish how many and what kinds of readers who now use the card catalog would be cut off from the microfilm catalog for one of these reasons.

Administratively, the microfilm catalog can be expected to fit into the structure of the Library with no new or insurmountable problems. It appears that they can be supervised by assistants below the librarian level, though problems may arise in connection with the fact that they will therefore be unable to provide the full range of information services. Futher research, perhaps, and careful planning would have to establish the proper classification of the position, the training required, and the precise duties to be performed. Careful attention should be paid especially to the relationship of the assistant to the reader on the one hand, and the librarian on the other.

Librarians and scholars seem fond of claiming that it is easier to find a book at The New York Public Library than at Harvard or the British Museum or the Bibliotheque Nationale. It does not seem from their comments that adopting the microfilm catalog with its time factor would put us "behind" in that comparison--but it would cut our "lead" a little. The fact that this Library is more convenient than ones elsewhere would be no reason to make it a little less convenient.

NOTES TO REPORT

Presumably those who evaluate the experiment will read the diary in its entirety (including the "notes on methodology"--which explain, among other things, the abbreviations used in the diary--and the other material used in connection with the experiment). However, some examples drawn from the diary illustrate points made or alluded to in the report. Following are some incidents with the date and time given:

11-11, 1:20 - The incident ending in the 'Administrative Office'. A reader was talking to the librarian at the Information Desk, who turned and pointed in my direction. I got up as reader walked over. "Dickens, please. The catalog." I got the proper cassette, inserted it in machine #2, and turned the crank to the "Dickens" entries. "Are you going to look through it, or is there anything in particular you want?" Reader had pulled up a chair, "I want to look through it." I explained that the "Dickens" entries begin with all "Collected Works", then "Selected Works", then individual works by title, then "Letters", "Miscellany", "Poetry", "Selections", and then entries for things he co-authored or edited, followed by works about him. "Can you turn it backwards and forwards." "Yes. Also, here's the focus knob. It will go out of focus. Here's how you turn it off, and this is for light intensity--you don't need that."

While reader was at machine, I found the appropriate secondary (supplementary) tray. "Here are a few more. Any card with something typed in the upper left-hand corner for a book received in the last few years might be in here." "Thanks a lot."

Later I wandered over to the reader to make sure everything was all right. "I'd better check that entry. I think you need a number after that p.v." (Dickens, Charles..Selected Works (Charles Ludwig)). Reader said, "It should be 79, I think. Here it is down here." "Oh, yes." What looked like part of a classmark was repeated on another part of the card. "I'll check anyway; I don't have anything else to do." I checked the cards in the enclosure. "It's 79. You're right."

Half an hour later, reader was still there. "It's dreadful. Too time-consuming." "It's an experiment. They microfilmed 20 catalog trays to see whether or not to do it to the whole catalog. They're changing to a new cataloging system using a computer, so they're going to freeze this catalog and put it either on microfilm or in book form." (One of my "semi-standardized descriptions", usually abbreviated "Expl. experiment, old & new catalogs", in the diary.) Reader claimed to like cards better, mentioning the focus, browsing, and searching problems, and saying that in a book catalog it is possible to see more entries at once.

Shortly after, I went on my lunch hour, and a relief person was at the machines. Several of the reader's call slips were returned for "verifies", and a librarian came over to check the entries on the cards. The librarian was unable to locate the entries on film corresponding to

those on the returned callslips, so after a while the librarian took the tray from the enclosure and located the entries there.

According to the librarian, there were two primary reasons for the inability to locate the proper entries on film. First the guide cards, which in this case contained filing instructions, were not filmed; this mistake was corrected when subsequent trays were filmed. Second, the librarian, who admittedly had had little experience with the machine, was unable to figure out quickly the organization of the entries by acting on hunches and skipping back and forth. The fact that the callslips were filled out in a confused way made no difference, since the librarian was able to match them with the appropriate cards in the card tray.

Reader left the area around 2:45, after having appeared disgusted with the machine and the amount of time it took, and commenting in addition that "it's bad on the eyes."

According to a staff member in Room 214, the reader then went there. (Room 214 is the Research Libraries Administrative Office, and complaints, among other things, are handled there). Reader talked with Mr. Baker, a short while, describing the incidents which had just taken place. Reader claimed to use the library a lot, and that the machines would be a great handicap since they double the time necessary to perform tasks requiring the catalog. Mr. Baker listened, then said the incident and reader's complaints would be recorded by those involved in the experiment. The reader seemed satisfied.

One thought occurred to me later: what if a reader's objection was not to the machine but to me, or what if a reader for some reason decided I could not be trusted to give their opinion proper consideration, or what if a reader and I had a clash of personalities? If no one else was asked to record information on the experiment (e.g. librarians at the Information Desk, personnel in Room 214), valuable information could be lost.

Incidents concerning the Memorex repairman:

7-22, 12:45; 8-4, 4:05; 8-6, 10:10 & 11:45 & 1:45; 8-26, 4:15; 8-27, 10:45 & 1:50; 8-30, 3:45 (pp. 2, 27, 32, 33, 75, 77-8, 81)

The first of the incidents concerning the Memorex repairman happened the first day of the experiment. He was called out and shown the focus problem. He was told that the film appears in focus at first, then jumps out after a few seconds. This problem was demonstrated to him. The repairman replied that the problem originated in the power supply and recommended that the Library tell its "electrican to put in another outlet for the machine rather than running it off the lamp." He said that what made him sure it was the outlet was the fact that the lamp was in focus and then jumped out; if it had not, the problem could have been something else. He was asked why the intensity of the light appeared unchanged, since problems originating in the power supply would

logically affect light intensity. "You don't know a lot about these things, do you," he smiled. Then he repeated his explanation.

August 4, when machine #2 failed to light at 4:00 in the afternoon, I switched light bulbs with #1, and #2's bulb lit in #1. I asked a couple of people where there were spare light bulbs, but no one knew. Then I called Memorex; they said they'd be out the next morning. As I recall, the man again claimed the problem was the power connection. Two days later, Mr. Lorona said he would call Memorex again. In the meantime, Louis Falek discovered that the fuse in #2 was missing. We tried the fuse from #1, and it worked in #2. We told Mr. Lorona, who said he would call Memorex and arrange for some spare fuses and light bulbs. That afternoon the Memorex man arrived and said the salesman should have explained the procedure for getting new bulbs, and told Louis and me to get new fuses marked 250 watts, 2 amperes.

On August 26, the third incident began. I was instructed to call Memorex about the fact that in #2 the sides may be out of focus when the middle is not, or the top may be out when the bottom is fine, and the fact that the lines of type are closer together on the left side than the right. Also, the alignment on the left was off. I called Memorex the next morning, and described the problems to someone who took the message and promised to send someone right out. In the meantime Mr. Sajor fixed the alignment problem himself by adjusting the mirror and said he and Mr. Noble were working on the focus problem. The next working day Memorex had not shown up, but Mr. Lorona decided not to call again, since the problems were under control.

The only time anything about the "sight problem" was ever tested:

9-13, 12:15 (p. 107) - A friend of a staff member, who had been by to see the machines before, asked for help in finding an entry in the National Union Catalog close by. He had left his glasses downstairs by accident. I found it for him and then asked him to see if he could see the entries on microfilm. He had to stand a "normal" distance from the machine, i.e. he could not lean over and put his face close to the screen, but otherwise he had no trouble. I asked him to look at the cards in a tray: a little trouble, but he could read them. I showed him Volume 4 of the Berg Collection book catalog, a 15-inch high book with photographs of 21 catalog cards on each page. He could read them only with difficulty and only from a distance of slightly more than arm's length. Incidentally, while we were discussing the new catalog, I mentioned that entries in the prospective catalog would resemble those in the Mid-Manhattan catalog. He made a face, saying they had left out information he needed, which was that a book was for reference only.

Report on Microfilm Catalog Experiment
(CLR Grant No. 516)

Part II: Use of Microfilm for Authority File

April 11, 1972

Part II of the Microfilm Project Funded by the Council on Library Resources, the purpose of which was to test the feasibility of an Authority File on microfilm cassettes, came to a close on February 29, 1972. The experiment began on October 1, 1971, and was scheduled to be concluded on December 31, 1971. Since the extension of the project for an additional two months did not significantly increase the cost of the project, it was believed that extending the time frame would permit involvement of larger numbers of cataloging personnel in an experiment which might have significant implications for the introduction of new techniques in the automated book catalog system.

The Authority File consists of a dictionary listing of all headings established for use in the new book catalog. The entries represented in the dictionary listing are those usually associated with authority files, though some libraries choose to have a separate file for subject headings. Most of the headings represent Library of Congress form of entry. Entries include personal authors, corporate entries, topical subject headings (including every permutation of subdivision and regionalization used in the book catalog) geographical entries (including topical subdivisions) series entries (including cataloging decisions), an elaborate structure of cross references, catalogers notes for internal use, and scope notes included for the use of the public in the book catalog. The Authority File also lists language codes for each entry, filing forms, type of entry code, computer-produced control numbers for retrieval maintenance. All headings are fully delimited, wherever required.

When the project commenced in October 1971, the Authority File consisted of nine thick volumes (approximately 3400 pages); when the project was concluded the file consisted of fourteen equally thick volumes (5482 pages). The Authority File will grow very considerably within the next several months. The rate of growth will probably not begin to decline for at least two years. Proposals for the merging of all topical subject headings contained in MARC records would vastly increase the size of the file. There would be obvious advantages if these headings could be merged into the Authority File, though it would represent a considerable cost increase if these were included in computer printouts. The computer printouts provided by the Systems Analysis and Data Processing Office are photographically reduced before they reach Cataloging Branch. The Authority File is cumulated quarterly and updated by weekly cumulative supplements.

The Authority File is inextricably tied to the new book catalog, with interface between authority file data and bibliographical data in the book catalog. While the Authority File is an indispensable file for the generation of headings in the automated book catalog, the extent of its use by catalogers is not completely clear at this point. Now that MARC interface has been successfully implemented, it is no longer necessary to pre-check entries in

the Authority File for the approximately 1500 records which are currently being input monthly by this method. Catalogers will depend on MARC proof for guidance in establishing headings which have not already been generated in the Authority File. Basic issues and monthly cumulative supplements of the book catalog are more accessible tools for quickly checking whether a heading has been established. These two alternatives for by-passing the Authority File are very significant, but it is too early to judge, with any degree of precision, how much consultation of the Authority File will be reduced. When the project was undertaken in October 1971 a total of seventeen sets of the Authority File (including two sets on microfilm cassettes) were deemed to be necessary. With the growth of the Authority File, however, it was decided to reduce the number of sets required to ten. It is highly unlikely that this number will be reduced in the future in view of the many access points required, e.g., locations within Cataloging Branch and in foreign language divisions.

When the project began in October 1971, the input of bibliographic records was still on an experimental and limited basis. Except for two para-professionals who were concentrating exclusively on the new system of cataloging, other catalogers were phasing into the new system on a more limited scale and were cataloging a far higher number of titles for the retrospective card catalog system. July 1, 1972, has been set as the target date for the complete phase out of the retrospective system of cataloging. Due to the training requirements of the new system of cataloging, there has been a careful phasing-in of the new procedures for each new group of catalogers. Until January 1972 the new system of cataloging was largely concentrated in Monograph Cataloging Section. Serial Cataloging Section did not become involved in the new system, and with the Authority File associated with the new system, until January 1972. The extent of use of the new Authority File on the part of serial catalogers was consequently limited during January and February. Serial catalogers, by the nature of serial cataloging requirements, would do less checking of topical subject headings than monograph catalogers. Towards the end of February, cataloging personnel of Jewish and Slavonic Divisions began training in the new system of cataloging. Their training had not progressed to the point, however, where they would be making extensive use of the new Authority File. A demonstration of the use of the Authority File on microfilm cassettes was held for cataloging staff of Jewish Division and Slavonic Division.

Evaluation of the microfilm project has been based on completed questionnaires distributed to nineteen (19) professional and para-professional catalogers. Approximately fifteen (15) additional personnel had been introduced to the use of the Authority File on microfilm, but it was not felt their experience had been extensive enough to enable them to make an evaluation of the new system.

Phase II of the Microfilm Project was limited to the use of two Memorex Readers, Model 1643 (automatic) and Model 1644 (automatic with a manual override). It was decided at the outset of the experiment, based on the use of manual machines in the first phase of the project, that manual machines would not meet the requirements of rapid checking of the Authority File.

Nineteen (19) questionnaires were completed, though some participants did not choose to answer some questions due to the limited time in which they

had been involved in the project. A reproduction of the questionnaire is attached. Brief comments following each question have been made by the Chief of the Processing Division. The comments are pased, in part, on written comments and conversations with the Chief Cataloger who, with the Chief of Processing Division, have monitored the project.

QUESTIONNAIRE

1. Authority File data are more quickly accessible in the

   (A) Computer printouts: 16

   (B) Microfilm Cassettes: 3

   Comment: The consensus of most users is that the computer printout provides a more rapid check. The response from the three catalogers who found the microfilm cassettes as a more accessible tool is surprising. Several time checks were made which demonstrated that zero in-in on a particular heading frequently took up to a minute, while searching the same heading in the printout could usually be accomplished in less than 30 seconds. While this type of checking was limited to random time checks, it is hard to conclude that, with the equipment used, checking is more rapid on microfilm.

2. Which Memorex Reader do you prefer?

   (A) Model 1643 (Automatic) 1

   (B) Model 1644 (Automatic with manual override) 18

   Comment: It is extremely difficult to zero-in on a specific heading with Model 1643. The manual override on Model 1644 represents a significant improvement over the earlier model and reduces the time required for locating a specific heading.

3. Indicate type of microfilm copy you prefer

   (A) Negative copy: 7

   (B) Positive copy: 12

   Comment: It is not believed these figures can be considered conclusive. Sometimes the quality of copy, whether negative or positive, was not consistently good. Failure to achieve the best quality of reproduction for either negative or positive was evident from time to time, so it is possible that participants were largely influenced by a poor negative while the positive of the same data may have reached standard requirements. From the standpoint of both legibility and focusing, second generation positives and third generation negatives were consistently of high standards. Catalogers traditionally work more frequently with positive copy and this conditioning may account for some bias on this question. If the proposal to accept the Authority File on microfilm is approved, further experimentation in the use of negative and positive copy would be recommended.

4. Focusing is better on

   (A) Negative copy: 9

   (B) Positive copy: 8

   Comment: Two participants thought focusing on the different copies was insignificant. It was not until late in the project that it was felt that reproduction of both negatives and positives achieved a high standard.

5. Did you find the line-guide attachment on Model 1644 useful?

   (A) Yes: 6

   (B) No: 11

   Comment: The line-guide is an attachment of no great significance. It should be considered an optional attachment which catalogers might choose to use or to ignore. Most use of the Authority File is concentrated on data on the left side of the file, but the line-guide could possibly be of some limited use when it becomes necessary to do some maintenance which would make line-up of data on the right side of the file with that on the left.

6. Would you prefer placement of reader at:

   (A) Sitting height: 18

   (B) Standing height: 1

   Comment: No readers were placed at standing height. If suitable furniture and space becomes available, it might be advisable to have both types. Catalogers going from their desks to the readers to make a quick check might find a standing location faster to use. For individuals doing extensive checking, the sitting height is obviously preferable. If the proposal to accept the Authority File on microfilm is approved, experiment with reader placement may be recommended.

7. This project has been limited to microfilm on Memorex cassettes. If you have had experience in the use of other microform formats, please indicate which of the following you find most acceptable:

   (A) Cassette: 13

   (B) Roll microfilm: 0

   (C) Microfiche: 0

   Comment: Six catalogers did not feel they had had enough experience with other formats of microforms to reply to this question. While microfilm on cassettes is not without flaws, the experience catalogers have had with this format has probably been more responsible, than any other factor, for overcoming many of the traditional objections librarians have to microfilm.

8. Have you found obstacles in the use of the readers?

   (A) Yes: 13

   (B) No: 6

   Comment: See comments under 9 below.

9. If your answer to the above question is yes, what was the obstacle to your use of the reader?

   (A) Queuing: 7

   (B) Reader malfunction: 7

   (C) Delay in filming of the Authority File: 3

   (D) Other: Eye strain (2) and jamming of cassettes (3)

Comment: The experiment was limited to the use of two readers and not infrequently to one reader (for reasons of reader malfunction) so the problem of queuing was not unexpected. In the event the proposal to accept the Authority File on microfilm is approved, enough readers to prevent any undue queuing would have to be requisitioned. Machine malfunction was primarily due to the frequent burning out of lamps. There was also jamming of cassettes. Servicing of readers interrupted use of readers. While only three catalogers complained about the delay in the filming of the Authority File, I believe this was one of the most serious flaws in the experiment. Cassettes for the latest weekly cumulative supplements were removed when superseded by a later weekly printout. This forced users to use the printout instead of the cassette. If we were to adopt microfilm as a substitute for printouts, however, catalogers would be handicapped if they did not have prompt access to microfilm supplements. During the course of the experiment catalogers were always able to fall back on the use of the printouts if microfilm of the same date was not yet available. On at least three occasions the weekly cumulative supplement on microfilm did not arrive until after the following weekly cumulative supplemtn was available in the printout. The weekly cumulative supplement on microfilm was prepared by an outside firm (Xerox). The delay in receipt of the microfilm varied, but was never completely satisfactory, and sometimes, as noted above, the microfilm was received too late for use. If we are to use the Authority File on microfilm, it would be essential camera equipment would be made available within Photographic Service so we could be assured delivery of microfilm within 24 hours of receipt of computer printout by Photographic Service. In my ovinion, delays encountered in the filming of the Authority File was the most conspicuous failure of the experiment.

10. With which system are you more likely to batch worksheets for Authority File checking?

(A) Computer printouts: 6

(B) Microfilm cassettes: 10

Comment: Catalogers working with worksheets accompanied by Library of Congress cataloging copy are more likely to batch their work than catalogers who are doing original cataloging. Since it is possible to remain in a seated position while checking a large number of worksheets against microfilm, I am not a little surprised that some catalogers found it more expedient to batch worksheets with computer printouts. Most individuals who did a large amount of batching worksheets preferred the microfilm cassettes over the computer printout. It is my personal view that batching of worksheets is a more likely prospect, if one could remain seated, and work with two or more cassettes, than to consult a dozen or more volumes of the printout. It must be conceded, however, that it takes less time to locate an entry in a printout than on microfilm.

11. Has the selection of the correct cassette been a problem?

(A) Yes: 1

(B) No: 16

Comment: Since the experiment never involved the use of more than three (3) cassettes, no problem was expected. In the event we accept the Authority File on microfilm, display racks or holders would be used. There is very little space for labelling contents of each cassette, but this is not a serious obstacle to acceptance.

12. How many readers do you believe would be required in your section if this system should be adopted?

(A) Monograph Cataloging Section: 4 readers (average)

(B) Serial Cataloging Section: 2

Comment: The Chief Cataloger and I agree that five (5) readers would be required for Monograph Cataloging Section. There is, of course, a higher production rate in Monograph Cataloging than in Serial Cataloging. Two readers should be adequate to meet the needs of Serial Cataloging. Not only is the production rate lower in this section but there would be far less need to consult the Authority File for subject headings in this unit. One additional reader would be required for placement in Jewish Division and one in Slavonic Division. Oriental Division should be able to share the reader in Slavonic Division. A total of nine (9) readers would be necessary to meet cataloging requirements of The Research Libraries.

13. Should copies of the book catalog be located in the same work area where the Authority File is located?

(A) Yes: 17

(B) No: 2

Comment: While 17 catalogers responded affirmatively to this question, in the opinion of the Chief Cataloger it does not seem likely that catalogers would be constantly checking back and forth between the two bibliographic sources. The new book catalog system is still such a new concept in The Research Libraries, it is perhaps premature to reach a conclusion about this question. I agree with the view of the Chief Cataloger, but if the microfilm system is accepted, experimentation in the display of bibliographical tools could be considered within space limitations.

14. The Authority File will grow very considerably in the next several months. Growth will continue through the years, though at a diminishing rate. If adopted, a sufficient number of readers would be purchased to avoid queuing. The availability of other equipment, and other types of microform format, would also be considered. Considering the factor of space saving, and the considerable cost savings of microfilm over computer printouts, would you find Authority File data in microform an acceptable sustitute for the computer printout?

(A) Yes: 18

(B) No: 1

Comment: The lack of space in Cataloging Branch is so critical that it is difficult to overstate its seriousness. Long before the Authority File reached its present size we realized we would be confronted with space problems for the display of this file as well as issues of the book catalog. Space and cost factors have undoubtedly weighed heavily in the affirmative response noted above.

Summary

Despite some of the flaws that appeared in the course of the experiment, microfilm as a substitute for Authority File printouts appears to be acceptable to most catalogers. The use of cassettes, as opposed to roll microfilm, seems to have had the effect of overcoming some prejudices individuals may have had towards microfilm.

While authority file data may be more quickly located in the printouts, and while more catalogers might prefer printouts for other reasons over microfilm, it is encouraging to note that most catalogers agree that microfilm would be an acceptable substitute for printouts. All catalogers are very much aware of space problems and the fiscal distress of The Research Libraries, but it is doubtful catalogers would find microfilm an acceptable substitute for these reasons alone.

Attached to this report is a paper prepared by Mr. Richard G. Noble, of the Systems Analysis and Data Processing Office, relating to the costs of printouts versus microfilm costs. It should be pointed out that Mr. Noble's estimates are based on the production of seventeen (17) sets of the printouts, but in the meantime it has been found possible to accommodate present needs with ten (10) sets of the printouts. Mr. Noble's presentation nevertheless makes a positive case for the acceptance of microfilm as an alternative to printouts. Processing Division has submitted a request for funds in the 1972/73 budget for the possible implementation of a microfilm system for the Authority File. It should be noted it is crucial that funds would also have to be allocated for the purchase of camera equipment which would make it possible to make in-house microfilm copies of the Authority File.

While there were certain flaws, or shortcomings, in the microfilm project, I believe most would be subject to correction or improvement. The consensus that microfilm is an acceptable substitute for computer printouts is encouraging. As a result of this experiment, I recommend the adoption of microfilm as a substitute for computer printouts for the Authority File.

The question of adopting microforms in other areas of Preparation Services should be explored or encouraged. The official catalogs, consisting of several million cards and which duplicate most of the public catalogs, except for subject headings and indexed items, occupy much valuable space in Preparation Services which is needed very urgently for other purposes. There will be a continuing need for the official catalogs although the use of these catalogs will decline. Contained in the official catalogs are data not represented elsewhere. The official catalogs will be heavily used in rehabilitating public catalogs which are scheduled for publication in book form. If reader/printers could produce acceptable copy, the catalogs on microfilm might be efficient tools for the rehabilitation project.

Allen J. Hogden

Allen J. Hogden
Chief, Processing Division

THE NEW YORK PUBLIC LIBRARY

LIBRARY MEMORANDUM

From: R.G. Noble

Date: November 23, 1971

TO: Mr. Allen Hogden

Re: Xerox versus Microfilm Costs

Attached is a set of calculations estimating the cost of Xeroxing the Research authority list versus the cost of microfilming these lists. The calculations show that utilizing microfilms in the period from October 1971 through June 1972 would realize a savings of approximately $8,000. This cost savings would mean that you could afford to purchase Memorex microfilm readers and produce the microfilm in that same period instead of utilizing the Xerox copies. These cost estimates are based upon the premise that the rate of accumulation for authority entries will continue to be about the same as it is now.

An increase in the number of bibliographic entries would mean a corresponding widening of the gap between the microfilm and Xerox costs. These costs should be taken as estimates only, but barring drastic changes in the input rate, or the cost of producing the microfilm, they should have about a 10% accuracy. The cost difference is so large that it may even pay to go to a much more expensive reader if this will make the difference between acceptance and non-acceptance of the microfilm by the catalogers of Preparation Services. A mix of Xeroxing the small supplements (under 200 pages) and filming the larger supplements and reaccumulations could also be accomplished.

The cost of producing the microfilm is based upon the present cost to us of going to an outside service and having the NYPL Photographic Services reproduce the film. If NYPL Photographic Services were to do the filming themselves, we probably could get the per roll cost to be less than the $20 per 50 foot roll cost now charged by Xerox. The problem would be to absorb the cost of the rent or purchase of a rotary camera. The rental cost of a rotary camera is approximately $160 per month. If the services rendered by an outside microfilm service are not timely enough, it would be worth our while to absorb the extra cost of a purchase of a rotary camera.

Another argument for utilizing the microfilm is that it is ecologically sounder than Xeroxing which produces mountains of waste paper. Economically it is sounder also since at the end of 8 months the Library would have 17 readers worth several thousand dollars instead of a mountain of scrap paper.

If there are any questions concerning the attached calculations, I will be glad to clarify them.

Dick Noble

DN:la

MICROFILM & XEROX COSTS

These computations are based upon utilizing the present system of printing the lists out on the computer printer then sending the listings to be copied. The cost of the original filming is based upon the charges to this office by the Xerox Corporation. These charges are higher than the costs that would be charged to us by the NYPL Photographic Services, if they had the proper equipment. The reason why Xerox was given the task instead of Photographic Services is because it would have been costlier to rent the proper camera to film the output than to have the Xerox Corporation film the output.

The basic costs for Xeroxing and binding the Xeroxed pages are as follows:

Cost to Xerox	0 - 50,000 pages	-	$.0216/page
	Next 50,000 pages	-	$.0136/page
Binding			$ .002/page
Misc. Costs (Covers, binders, etc.)			$.0014/page
		TOTAL	$.0250/page

The basic costs for microfilm production are as follows:

Original filming based on minimum of 50 feet of film at $20.00
Copy cost based upon minimum of 50 feet of film at $3.50

Cost per page of original	$ .020
Cost per page of copy	$.0035

Sample cost to produce October cumulations:

Xeroxing: 17 copies, Xeroxed, bound of 2,600 pages
17 X 2,600 = 44,200 total pages
Cost = 44,200 X $.0250 = $1,105.00 TOTAL COST $1,105.00

Microfilm: Cost to film 2,600 pages - 2,600 fit on 100 feet
Cost = $40.00

Cost to produce 17 copies = 17 X $7.00 = $119.00
Misc. Costs (spooling, etc.) =$10.00
TOTAL COST $ 169.00

PROJECT COSTS - MICROFILM

No. of Pages Reaccumulation	No. of Pages In Supplement	Cost to Microfilm Original @ $20 min.	Cost to Produce Copies ($5-7/copy)
2,600 10/30/71	Total 3245 - 8 weeks	$160.00	$ 640.00
3,231		40.00 (2 rolls)	238.00
	Total 3250 (9 weeks)	180.00	720.00
3,831 (2/1/72)		60.00	238.00
	Total 4620 (11 weeks)	220.00	880.00
4,501 (4/18/72)		60.00	238.00
	Total 3850 (10 weeks)	200.00	800.00
5,201 (6/22/72)		70.00	280.00
		$990.00	$4,034.00

PROJECT COSTS - XEROX
AT ADDITION RATE OF 70 PAGES PER WEEK

No. Of Pages Reaccumulation		No. Of Pages Supplement	Cost To Xerox & Bind (17 copies) @ $.0250
2,600(10/30/71)			
		177	
		263	
		318	
		389	
		426	
		480	
		561	
		631	
	TOTAL	3,245	$1,379.125
3,231 (2/1/72)			$1,373.175
		70	
		140	
		210	
		280	
		350	
		420	
		490	
		560	
		630	
	TOTAL	3,150	$1,338.75
3,831 (2/1/72)			$1,628.175
		70	
		.	
		.	
		.	
		.	
		11 weeks	
		.	
		.	
		770	
	TOTAL	4,620	$1,963.50
4,501 (4/18/72)			$1,912.925
		70	
		.	
		.	
		.	
		.	
		10 weeks	
		.	
		.	
		700	
	TOTAL	3,850	$1,636.25
5.201 (6/22/72)			$2.210.425

$13,442.325

Report on Microfilm Catalog Experiment
(CLR Grant No. 516)

Part III

A. Use of Microfilm as Substitute for Book Catalog by Preparation Services Personnel

Part III A of the Microfilm Project, the book catalog on microfilm, was carried out by Monograph Cataloging Section, Serial Cataloging Section, and Searching Section during the month of March. Due to the phasing in of the new system of cataloging, Part II of the experiment, the Authority File on microfilm, was extended to a total of five months in order to allow for the participation of as many members as possible of the Cataloging Branch staff. While the results of Part III A may, in many ways, be deemed inconclusive, it is doubtful the results would have been otherwise had the experiment extended beyond the duration of one month. A total of 44 staff members of Cataloging Branch participated in the project. Of this total, 24 were professional librarians and 20 were para-professionals. Part III of the Microfilm Project was not limited, of course, to participation by members of the Cataloging Branch. The major part of this part was conducted at the Public Catalog in the General Research and Humanities Division over a three month period.

The basic volumes of the Dictionary Catalog of The Research Libraries (January 1972) and the monthly cumulative supplement for the month of March 1972 were used for the experiment. These parts of the catalog were placed on two cassettes for each of three microfilm readers. The microfilm readers used in the experiment were (1) Xerox reader with two-part cassettes, (2) Memorex reader (automatic), Model 1643, and (3) Memorex reader (automatic with manual override), Model 1644.

The following is a summary of the results of 44 questionnaires completed by members of the Cataloging Branch. A copy of the questionnaire is attached.

1. Except for three users, the Memorex reader, Model 1644 (automatic with manual override) was rated as the best reader.

   Except for three users, the Memorex reader, Model 1643 (automatic) was rated as second choice.

   Except for two users, the Xerox reader was rated as third choice.

2. Most readers found the Xerox reader to be unacceptable. While two users commented on the excellent resolution of this reader, most readers found this equipment unacceptable because of the difficulty of placing or removing the two-part cassette. The two-part cassette was extremely cumbersome to manipulate and the risk of damage to the film was always present. The Memorex reader, Model 1643 (automatic) presented many difficulties in zeroing-in on a particular entry. The Memorex reader, Model 1644 (automatic with manual override) was rated the best reader, but several users pointed out that it took longer, even under the best conditions, to locate an entry on microfilm than in the computer printouts.

3. Forty two (42) users responded negatively to the question whether there was any advantage in the use of microfilm over the printed volume.

4. Opinion on the question of whether microfilm would be an acceptable substitute for the printed book catalog, once the latter had grown to considerable size, e.g., 20 volumes, was evenly divided with 22 positive and 22 negative responses.

5. The question of whether microfilm for the monthly cumulative supplement would be an acceptable substitute for the monthly printed format, if the basic cumulation were made available in printed volumes, drew nineteen (19) positive and twenty-five (25) negative responses.

6. Twenty four (24) users expressed the opinion they would find computer output microfilm (COM), if it were to become available, less acceptable than the photocomposed catalog with various type faces. Eighteen (18) users expressed the view that COM, if it were made available, would make no difference from the standpoint of acceptability. Two (2) users expressed the view that COM, if it were made available, would be a more acceptable format than the photocomposed catalog with various type faces.

7. Twenty seven (27) users responded they would find microfilm a more acceptable substitute for the authority file, while ten (10) individuals expressed the view that microfilm was a more acceptable substitute for the book catalog, including supplements.

While most participants chose not to make detailed comments on the experiment, the following comments by a few individuals are pertinent:

1. If supplements were placed on microfilm, catalogers would be more inclined to use the weekly cumulative bibliographic in-process list than they would supplements on microfilm.

2. The present book catalog format with constrasting type-faces would probably be easier to scan and search on microfilm than COM output would be.

3. A few users commented that when the printed book catalog had achieved considerable size, a single set would permit access to several readers at the same time, but that use of microfilm with much data condensed on a single cassette would make purchase of several microfilm readers a necessity.

4. One participant made an observation on the size of the microfilm readers, and suggested that more emphasis should be placed on miniaturization of readers. The exhibits at the recent meeting of the National Microform Association would indicate this development is taking place. Severe space limitations in Preparation Services would make it very difficult to place microfilm readers if microfilm were to be accepted as a substitute for the book catalog, or for authority files.

5. Several serial catalogers indicated that cataloging in this area was less likely to be a mass production activity and the consultation of both the book catalog and the authority file would be far

less frequent than it would be for monograph catalogers. Serial catalogers who expressed a view on this subject indicated a decided preference for the printed book catalog over a microform substitute.

6. Several catalogers commented on future space savings in the use of microfilm over the printed catalogs and authority files. None of these catalogers expressed a preference for microfilm as a format over the printed book, however.

Conclusion

While the results of this phase of the experiment are inconclusive, the consensus, based on the results of the two phases in which Cataloging Branch participated, would be that microfilm would be a more acceptable substitute for the authority file than it would be for the book catalog and/or supplements to the book catalog. It is open to question whether this conclusion might have been reached if the book catalog had achieved the same bulk as the authority file. The authority file on microfilm as an acceptable substitute would appear to be a more viable prospect than the book catalog at this time.

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Report on Microfilm Catalog Experiment
(CLR Grant No. 516)

Part III

B. Use of Microfilm as Substitute for Book Catalog in Public Catalog Room

The third part of the microfilm experiment was, as mentioned earlier, conducted both in the Processing Division and in the Public Catalog Room of The Research Libraries, under the administration of the General Research & Humanities Division. This part of the report deals with the latter location and with public response to microfilm as a substitute for the Research Libraries book catalog. The period covered extends from January 24 to March 31, 1972.

With the phasing out of the card catalog system as of December 31, 1971, the new book catalog of The Research Libraries came into use as the principal means of public access to titles with 1972 imprint dates. Accordingly, multiple copies of the January 1972 issue of the book catalog (representing books and book-like materials added to the collections since January 1, 1971) were placedin public service divisions of The Research Libraries, as well as in those areas of Preparation Servicesvhere consultation with the official catalog had been necessary.

As in Part I of the experiment, and in continuation of it, access to the holdings of The Research Libraries for this period was limited in the Public Catalog Room to microfilm in the case of the January cumulation and the February supplement of the new book catalog. Both were available in negative and positive copies for use on the two Memorex 1642 viewers retained from Part I of the experiment. The March supplement was used only in book form. In this way it was possible to obtain reader response to negative as opposed to positive microfilm, microfilm as opposed to the card catalog, and microfilm as opposed to the book catalog.

Throughout this period the assistants assigned to the project were asked to record comments by the public and to explain the nature of the experiment when this seemed appropriate. Comments recorded, as in Part I, covered a wide range of interest and opinion, but an attempt has been made to summarize them as follows:

1. Advantages of film and book over card catalogs:

   a. Items easily missed in flipping cards rapidly. Items more visible in book catalog or on film.

   b. New material made known to reader faster. No delays in printing or filing cards

   c. Search in a more limited area. Card catalog extends around a large room.

d. Researcher from another institution can search film at a distance from New York if film or book catalog is generally available.

e. Some readers find searching book catalog faster than card catalog.

2. Advantages of card catalog over book and filmed catalogs:

a. All works by one author or on one subject filed together. Necessary to look in more than one place with book or filmed catalogs (both cumulation and supplement).

b. If date of publication not known, search has to take place in both card catalog and book or filmed catalog.

c. Tracings are present on cards, not in book or filmed catalog.

d. Some readers find searching card catalog takes less time than either book or film. Reference librarians find card catalog helpful with telephone requests.

3. Advantages of book over microfilm:

a. With book catalog, random access is possible. Open volumes where you wish. With microfilm, necessary to crank until you reach your destination.

b. No problems with machines and maintenance.

c. Some readers find film hard on the eyes.

4. Technical problems:

a. Improved equipment would save time wasted during break-downs (focusing chain found to slip off wheel too easily).

b. The two machines were not found to operate with the same degree of ease on the part of the user.

c. Focusing found to be a major problem, with constant manipulating necessary.

d. Objections raised to time required for hand operated machines (automatic machines were not used in the Public Catalog Room).

e. Plastic cassettes found to be easily breakable.

f. Positive microfilm easily became dirty and scratched.

g. No guides on film to indicate major alphabetical divisions. Large lettering suggested at intervals on film to indicate quickly how far reader has progressed in going to his desired item.

The foregoing represents in effect a distillation of over 200 pages of the journal which was kept by the assistants assigned to the project during this phase of the experiment. It should be noted that comments quoted reflect opinions both of the public and of the reference staff.

If it is possible to evaluate this phase of the experiment, it may be said that reader response was similar to that received in Part I of the experiment. One important difference, however, is the fact that the needed public information was in all instances legible on the film produced from the new book catalog; this was not the case in Part I, which involved microfilming of cards which were in themselves illegible or damaged. The implication here is that, if the book catalog should not be available, the needs of the reader could be met, though perhaps imperfectly, by microfilm.

THE NEW YORK PUBLIC LIBRARY
THE RESEARCH LIBRARIES
PROCESSING DIVISION

Microfilm Project -- Phase III

Staff of Processing Division who participated in Phase III of the Microfilm Project, the book catalog on microfilm, are requested to complete the following questionnaire. Many technical questions in the questionnaire for Phase II have been omitted. If you have altered your opinion on any of these questions, or didn't respond to some of the questions on Phase II, please comment on page 2 of this questionnaire.

1. Phase III used two Memorex readers and one Xerox reader. Please indicate your order of preference (1,2,3) for the three readers:

   (A) Xerox reader with two-part cassette_____

   (B) Memorex Reader, Model 1643 (automatic)_____

   (C) Memorex Reader, Model 1644 (automatic with manual override)_____

2. If you found any of the above readers unacceptable, please identify the reader, and list your objections:

3. In this phase of the experiment, the basic volume (January 1972) and the March cumulative supplement were reproduced on microfilm. At this stage of development of the book catalog, do you find any advantage in the use of microfilm over the printed volumes?

   (A) Yes_____

   (B) No _____

4. Would you find microfilm an acceptable substitute for the printed book catalog once the latter has grown to considerable size, e.g., 20 volumes?

   (A) Yes_____

   (B) No _____

5. Would you find microfilm for the monthly cumulative supplement an acceptable substitute for the monthly printed volume, if the basic cumulation were made available in printed volumes?

   (A) Yes_____

   (B) No _____

6. If computer output microfilm (COM) were available, with upper and lower case characters similar to those used in the Authority File, would you find this

   (A) More acceptable than the photocomposed catalog with various type faces _____

   (B) Less acceptable " " " " " " " " _____

   (C) No difference_____

7. At this stage of development of the new system of cataloging; microfilm is a more acceptable substitute for

   (A) The Authority File_____

   (B) The Book Catalog, including supplements_____

8. Additional comments:

_____ _____ _____

(Name) (Unit) (Date)