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Editors: Material published in LRTS is not copyrighted. The courtesy of citation to the original publication is requested when material is reprinted. Publication in LRTS does not imply official endorsement by the Resources and Technical Services Division nor by ALA, and the assumption of editorial responsibility is not to be construed necessarily as endorsement of the opinions expressed by individual contributors.
In theory, classificationists always avoid critical classification; that is, the introduction of their own bias and prejudices into the schemes they compile. In practice, all the schemes available to librarians reflect to a greater or lesser degree the prejudices of their origins. In some cases it is difficult to see any justification for this; for example, the peculiar attitude toward women shown by many schemes. In other cases schemes reflect perhaps too closely the culture on which they are based. No solution is proposed, but it is important that librarians be aware of the problems.

CLASSIFICATION THEORISTS have always emphasized the importance of the objective approach in the construction of classification schemes; the scheme should not reflect the prejudices of its maker, but should represent some kind of eternal and external truth. However, when one begins to examine almost any scheme it quickly becomes clear that, far from being objective, it is likely to reflect both the prejudices of its time and those of its author. Most library school students are familiar with the fact that although Dewey did not go quite so far as Parson Thwackum, he would certainly have had a measure of sympathy with that learned gentleman's statement: “When I mention religion, I mean the Christian religion; and not only the Christian religion, but the Protestant religion; and not only the Protestant religion, but the Church of England.” When Dewey mentioned religion, he did indeed mean the the Christian religion; and he therefore made no attempt to give a specific place in his scheme for the latter, since it was equivalent to the general heading. Other religions were consigned to a brief limbo, adequate for their triviality. Though recent editions of the scheme have endeavored to redress the balance, it has not been possible to find a single piece of notation for the Christian religion, which now figures as one of the centered headings which cannot be used in arrangement.
This much the world knows well; what is perhaps not quite so widely realized is that this kind of prejudice permeates many other areas in the Dewey Decimal Classification, and is also commonplace in other schemes. In particular, the treatment of Woman and Sex in most general classification schemes could lead one to believe that the compilers were misogynists to a man, as the following examples may help to demonstrate.

In the 16th edition of DDC, as in previous editions, we find a heading:

390 Customs and folklore
   Including habits, conventions that have become traditional

As one of the subdivisions of this heading, between Etiquette (395) and Gypsies (397) we find 396 Woman (presumably a habit one should not try to kick). This anomaly has been removed in the 17th edition, but others remain. For example, the general pattern of subdivision in Biography parallels that of the scheme as a whole, with the exception of certain divisions of 920.1/8

920.1 Bibliographers
920.2 Librarians
920.5 Encyclopedists (so far, so good; this reflects Class 000)
920.4 Publishers and booksellers
920.5 Journalists
920.6 Academicians
920.7 Women
920.8 Eccentrics

In the 17th edition, 920.6 and 920.8 are deleted, while 920.7 is changed to give separate subdivisions for Men and Women; but a more satisfactory solution would have been to delete 920.7 also, since both women and men are included in Social Organization as Groups. Furthermore, the change in editor's preference in Biography from 16th to 17th edition means that it is now recommended that one should use Standard subdivision 092 rather than subdivisions of 920; so to what number should one add 092 for biography of women? Not 070!

Women were evidently so rarely educated in Dewey's day that he found it necessary to devote a special place to this topic; so the subdivisions of Education run:

370 Education
371 Teaching
372 Elementary
373 Secondary
374 Adult
375 Curriculum
376 Women
377 Religious and moral education

There are obviously plenty of opportunities for cross-classification here; but in any case, when so much of our education nowadays is coeduca-
tional, should we still be thinking of the education of women as something worthy of special treatment?

The index also has its oddities. Under Women one finds the subheading Liberarians [sic] 023.5. When one turns to the tables at this class number, it is to find that it refers to Library Staff: of women there is no mention. Can it be that John Knox was thinking of Chief Librarians when he sounded the First blast of the trumpet against the monstrous regiment of women in 1558?

Other schemes reveal similar peculiarities. In the Bibliographic Classification, for example, we find Women considered as part of Social Welfare:

Q SOCIAL WELFARE
   ... Amelioration, Women, Socialism, Internationalism
QU Recreation, social and cultural aspects
QV Children, Childhood ...
QW Women, Woman, Womanhood
QX Socialism, Communism, Fascism, Anarchism, etc.

Fremont Rider seems to have thought along the same lines as Dewey, for in his International Classification, we find a heading:

JT Folk lore Etiquet Women

and elsewhere, an interesting comment from the sidelines:

NAV Educational opportunities for women (past history and present fact)
The Library of Congress does treat Women as a social group, but with some strange bedfellows:

H SOCIOLOGY
HQ-HT Social groups
HQ Family, Marriage, Women
HS Societies: secret, benevolent etc
HV Social pathology: social and public welfare: criminology
HX Socialism, Communism, Anarchism

Can it be that behind every crime there stands revealed the hidden hand of women?

When we turn to Sex, the position becomes even more delicate. Most schemes reflect an approach to the subject best described as Victorian. For example, both DDC and Rider have a chronological sequence under Customs of the Life Cycle:

Birth customs
Family and home customs
Courting customs
Marriage customs
Sex customs

This hardly accords with the permissive society, but in any case, there are many societies throughout the world where the above has never been the chronological sequence. Similarly, when one comes to consider the pejo-
rative implications of words such as perversion, there are many things that might raise an eyebrow. From DDC 16:

- 301.4 Social organization
- 301.42 Family
- 301.424 The sexes in society, including celibacy, deviations in sex life, e.g. premarital relations, adultery, homosexuality

In the 17th edition this has become:

- 301.41 The sexes
- 301.412 Sex life outside marriage Concubinage, premarital relations, adultery, prostitution, homosexuality and other perversions

In Rider we find:

- JDP Deviations in sex life
  - Homosexuality Premarital sex relations Free love

Bliss has forebodings of the wrath to come:

- QL Vice, depravity, immorality (Sociological aspects)
- QLF Mental deterioration resulting from depravity

—a foreboding shared more recently by Portnoy. When we find in psychology:

- I Psychology
- IL Abnormal
- ILO Mental deficiency
- ILS Sexual abnormalities, perversions etc. Eroticism, nymphomania

it is hardly surprising that lower down the same page we find:

- ILT Treatment and care of mental deficiency and abnormality
- ILTS Sterilization

(and note the two literal mnemonics!) Bliss also appears to regard homosexuality as synonymous with masturbation and Onanism, (HHM), a confusion not shared by Portnoy.

The Library of Congress Subject Headings list also has some oddities, but these appear to be a result of lack of method rather than impartiality:

- Sexual crimes see Sex Crimes
- Sex perversions see Sexual perversions
- Sexual psychology see Sex (Psychology)
- Sexual hygiene see Hygiene, sexual

Even Ranganathan presents a somewhat strange view of the world in his seminal mnemonics: 8

5 . . . public controlled plan, emotion, foliage, aesthetics, woman, sex, crime . . .

It is easy enough to find similar prejudices in other subject areas. Both DDC and LC regard Capitalism as economic theory, but Socialism as something rather different—in the case of DDC an ideology, in the case of LC a sociological phenomenon: I am a theorist, you are an ideol-
ogist, he is a tool of the Communists, perhaps. Sanford Berman has pointed out⁹ that the Library of Congress Subject Headings represent a white racist imperialist point of view which can prove embarrassing in an African university library. It is more difficult to see exactly what can be done to improve the situation generally. In some cases it would be possible to alter definitions to bring the overall sense more into line with modern ideas; in others, notational problems make it remarkably difficult to change the existing structure for a more satisfactory one. Perhaps we should just be grateful that at least one of Dewey's more jaundiced headings has now disappeared from the schedules since the 14th edition:

183.7 HUMBUGS QUACKERY
Charlatans Impostors Subdivided . . . like main classification

(my italics) Now there was a man who wasn’t afraid to speak his mind!

REFERENCES


*Volume 15, Number 2, Spring 1971* · 121 ·
The Treatment of the American Indian in the Library of Congress E-F Schedule*

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The treatment of the American Indian in the Library of Congress Classification: Class E-F is inadequate and out of date. The American Indian is segregated from the United States, the American Indian history is arranged with bias, and the American Indians appear frequently as a savage people. In the last decade, the civil rights movement has gradually changed the nation's attitude toward minorities. The E-F Class needs reasonable revision to reflect this current thinking. This revision could be done in a simple way by adding a few more classes and changing some wordings.

The United States is a mystical melting pot. Some minorities are assimilated here and have thrived. Some minorities, unfortunately, have not been integrated with the majority. To make it worse, those unassimilated minorities have long been misunderstood and impoverished. Among the impoverished minorities, the American Indian has suffered the most. The stories of the American Indian sufferings are shocking. They are historical facts; the author will not repeat them here.

Library classification, as Mr. LaMontagne describes it, "reflects man's activities and records." So, it is not surprising to note that in the Library of Congress Classification. Class E-F: History: America, the treatment of the American Indian, exactly reflects the way in which they were regarded at the beginning of the twentieth century, when this schedule was originated. Class E-F, American History was the first published schedule of the Library of Congress Classification System. The first edition appeared in 1901; the second edition was published

* U.S. Library of Congress. Subject Cataloging Division, Classification. Class E-F: History: America. With supplementary pages (3d ed.; Washington: For sale by the Superintendent of Documents, U.S. Government Printing Office, 1965). This paper deals with America, U.S. history (E 11-850), and U.S. local history (F 1-975) only; British America and Latin America are not included. The American Indian in this paper refers only to the Indians of the U.S.
in 1913. The latest one, the third edition, first appeared in 1958. Figure 1 is a partial outline of the E-F schedule.

AMERICA

E
11-29 General.
31-45 North America.
51-74 Pre-Columbian America.
77-99 Indians of North America.
81-83 Indian wars.
99 Indian tribes, A-Z.
101-139 Discovery of America and early explorations.
103-110 Pre-Columbian period.
111-120 Columbus.
121-135 Post-Columbian period.
141-143 Descriptive accounts of America to 1810.

UNITED STATES

151-169.5 General.
171-179.5 History.
173 Sources and documents.

UNITED STATES LOCAL HISTORY

F
16-30 Maine.
975 Central American, West Indian, and other countries protected by and having close political affiliations with the United States (General).

Figure 1


From this outline, certain observations can be drawn. First, the American Indian is segregated from the United States. Classes E11-143 are for the history of America. Indians of North America, including the American Indian, are classed here in E77-99. United States history includes E151-850. In the F1-975 schedule of the United States local history, the American Indian is excluded. This segregation was the true picture in the beginning of the twentieth century; it is technically no longer the truth. Today, the American Indian is a part of the United States, because all Indians were granted full citizenship in 1924.

Second, the American Indian's history and civilization are arranged with bias. According to the E-F schedule; the history of America, and of the United States is arranged chronologically. Classes E11-143 are for the early history of America. Indians of North America are classed in E77-99; followed by the Columbian period. Classes E151-850 are
for the history of the United States. It is roughly arranged by each United States president’s administration. The history and civilization of the American Indian were classed in the pre-Columbian era. After almost two centuries of progress, the United States has moved to the moon age, but the history and civilization of the American Indian, at least in the Library of Congress E-F schedule, might have been stopped in 1898. Class E83.895, “Chippewa war, 1898” is the last mentioned date for American Indian history, after this date, there is no class number for twentieth century American Indian history.

Another interesting observation is the militant relationship between the American Indian and the United States government. In Indian wars classes (E81–83), the word “massacre” appears nine times. The United States cavalry and the American Indian might have massacred each other in the nineteenth century. Since then, American Indians have been civilized by the United States government rule; yet in Western movies and television, as well as in the Library of Congress E-F schedule, American Indians still frequently appear as savage and brutal people.

In the last decade, the civil rights movement has gradually changed the nation’s attitude towards minorities. A library classification must keep reasonably abreast of the current thinking and activities; otherwise, it will become out of date and eventually die. A library classification, therefore, needs constant revision to absorb current thought. On the other hand, a revised classification which requires a tremendous reclassification of its user's collection will eventually die also. Regarding the topic of the treatment of the American Indian, the E-F schedule could be revised to reflect current thinking, yet keep reclassification to a minimum. We can achieve this by maintaining all the established class numbers; all we need is to add a few more classes, and change some old wordings.

In order to integrate the American Indian history with the United States history, we can simply move the United States history up to start from class E77 on. Change the caption of classes E77–99 “Indians of North America” to “American Indian.” After all, it covers mainly the American Indian. Furthermore, change the caption of classes E151–169.5 “General” to “United States (General).” By doing this, the American Indian will be included as a part of the United States. Figure 2 is a comparison of the two outlines.

Concerning the militant relationship between the American Indian and the United States government, we can contribute our share to the solution of this problem by eliminating some inappropriate wordings. First of all, change the caption of classes E81–83 “Indian Wars” to “History.” In addition, we will keep all the subclasses of the individual wars, but replace all the words “massacre” by “incident.” For instance, E83.73, “Natchez Massacre, 1729” will read: “Natchez Incident, 1729.” If we do not portray Indians as a bunch of savage people, and Indians
OLD OUTLINE

AMERICA

E

11–29 General.
31–45 North America.
51–74 Pre-Columbian America.
81–88 Indian wars.
99 Indian tribes, A–Z.
101–139 Discovery of America and early explorations.
103–110 Pre-Columbian period.
111–120 Columbus.
121–135 Post-Columbian period.
141–143 Descriptive accounts of America to 1810.

UNITED STATES

151–169.5 General.
History.
171–179.5 General.
173 Sources and documents.

PROPOSED NEW OUTLINE

AMERICA

E

11–29 General.
31–45 North America.
51–74 Pre-Columbian America.

UNITED STATES

77–99 American Indian.
81–83 History (to 1900)
99 Indian tribes, A–Z.
101–139 Discovery of America and early explorations.
103–110 Pre-Columbian period.
111–120 Columbus.
121–135 Post-Columbian period.
141–143 Descriptive accounts of America to 1810.
151–169.5 United States (General)
History.
171–179.5 General.
173 Sources and documents.

Figure 2


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do not regard the United States cavalry as a bunch of brutal soldiers, maybe we can understand each other better. The proposed revision can best be illustrated by the schedules shown in figure 3.

**Old Schedule**

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**Proposed New Schedule**

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**Figure 3**


In the E-F schedule, the last mentioned date for the history of the American Indian is 1898; after that date, there is no appropriate class number for the current history of the American Indian. For the purpose of keeping the American Indian history up-to-date, we can add a new class E88.4, 20th century; and subarranged by subjects A–Z. For instance, E88.4 C5 will stand for American Indian, twentieth century, civil rights movement. When the time comes, another new class E88.5, 21st century could be added. Figure 4 will demonstrate the merit of the proposed revision.

The E-F schedule was first published sixty-nine years ago. In a period of more than half a century, no radical changes have been...
**OLD SCHEDULE**

Indians of North America.

Indian wars.

83  Individual wars-Continued.

.866  Indian wars, 1866–1898.

  Fort Phil Kearny Massacre, 1866; Red Cloud War, 1866–1867; etc.

  Biography: George Crook, Nelson Appleton Miles, etc.

.868  Battle of Beecher Island, 1868.

.895  Chippewa War, 1898.

Captivities.

  Indian atrocities, depredations, etc. Adventures, escapes, etc., of captives.

85  General works. Collected narratives.

87  Individual captivities.

  Prefer classification in E83 or E99 if captivity relates to a particular war or tribe.

Biography.

89  Collective.

  Including portraits.

**PROPOSED NEW SCHEDULE**

*American Indian.*

*History (to 1900)*

83  Individual wars-Continued.

.866  Indian wars, 1866–1898.

  Fort Phil Kearny *Incident*, 1868; Red Cloud War, 1866–1867; etc.

  Biography: George Crook, Nelson Appleton Miles, etc.

.868  Battle of Beecher Island, 1868.

.895  Chippewa War, 1898.

Captivities.

  Indian atrocities, depredations, etc. Adventures, escapes, etc., of captives.

85  General works. Collected narratives.

87  Individual captivities.

  Prefer classification in E83 or E99 if captivity relates to a particular war or tribe.

88.4  20th century history. By subjects, A–Z. e.g. C5 Civil rights.

88.5  21st century history. By subjects, A–Z.

Biography.

89  Collective.

  Including portraits.

Figure 4


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made. The schedule needs "extensive revision and perhaps even replacement by new schedules." One of the topics which requires "extensive revision" is the treatment of the American Indian. The above proposed revision will integrate the American Indian history with the United States history, help change the American Indian's militant image, and keep the American Indian history schedule up-to-date. The treatment of the American Indian is a good point to investigate further for future editions.

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1. Leo E. LaMontagne, American Library Classification; With Special Reference to the Library of Congress (Hamden, Conn.: The Shoe String Press, 1961), p.342.
4. Ibid.
5. LaMontagne, p.237.
6. Ibid., p.341.

Comments on the Thomas Yen-Ran Yeh Proposals

EUGENE T. FROSIO
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The Library of Congress is grateful for the opportunity to study Mr. Yen-Ran Yeh's proposed revisions to that portion of the LC Classification System which deals with the Indians of North America, namely, the section, E75-99, of the American History schedule. After examining Mr. Yeh's paper it is our conclusion, regrettably, that with the exception of one or two minor points, it is impossible to adopt any of the proposals offered for inclusion in the present schedule. While it is true that most numbers and captions of this section were established in the early years of this century, we feel that they have borne the passage of time fairly well, certainly far better than many other portions of the classification system, and that they still provide a suitable and useful scheme for the shelving arrangement of books on these Indians.

In the following paragraphs we clarify our position by taking up Mr. Yeh's proposals item by item.

Indians as a minority group.—Mr. Yeh's stated purpose in reworking the schedule is to remove from it the stigma of nineteenth century
thinking, e.g., the notion that Indians are a “bunch of savages,” and to permit it to show the Indians as they should be regarded in view of current attitudes towards minority groups, namely, that they are an impoverished, sorely abused, minority group of the United States fighting for social justice. We feel, however, that to read such an outlook towards Indians in the existing schedule is to misinterpret it; and we cannot agree that current thinking on Indians requires them to be treated merely as another minority group of the United States. It is quite clear from the tables themselves that the intention of the creators of the classification was to treat the modern Indians as remnants of a vast group of peoples who once populated the entire New World long before the arrival of Europeans. This conceptualization of the Indians is still valid today, it seems to us. The primacy of the Indians in the Western Hemisphere is a fact, and must be recognized in any classification system for American History. On the other hand, to attempt to stress only their present economic plight would mean ignoring their origin, as well as their unique cultural heritage. Our schedules must be broad enough in scope to be able to accommodate the many types of books we catalog on Indians. We cannot emphasize one aspect and hope to be able to handle all other aspects as well.

*Indians and United States History.*—North American Indians have been classed as a group close to the beginning of the American History schedule, where general topics pertinent to the Americas as a whole are listed. For convenience they were placed in E75–99, which is immediately behind the section for the Indians of all of the Americas, E51–73. This separation from any one country was intentionally done, not with the thought of “segregating” them with prejudice, but to represent the fact that they were the first inhabitants of North America, that today they are still found in Canada as well as the United States, and that they possessed unique cultures of their own.

The original classifiers could have extracted from the larger area the Indians situated within the present boundaries of the United States, and classed them with the minority groups of the United States in the E184–185 area (general numbers for elements in the population of the United States). This would have meant, however, that Indians of individual states would have been classed in F1–975, the class numbers for the histories of the individual states. Indian archaeology would have been similarly scattered in other numbers. Many special aspects of their culture would have been siphoned off to other schedules, such as art in the N, Fine arts, schedule. We are most grateful to our predecessors who had the wisdom not to fall into such a trap. One of the most delightful aspects of the existing tables for the Indians of North America is the fact that they bring together all books on these Indians in one location on the bookstack shelves; we can think of no other idea more useful to researchers seeking to locate Indian materials. Nevertheless, for persons who look for United States Indians at E184, a suitable “see” reference to E75–99 has been prepared.

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Mr. Yeh has proposed that the original effort to class Indians separately be counteracted by a “paper move” involving the recaptioning of the section for Indians of North America, so that it is included in the United States History section. That is, then, the section E75–143 would be also called United States history. We feel this move would not accomplish much if books are not to be moved at the same time, since the whole purpose of a classification system is to allow for an orderly arrangement of books on library shelves. More serious, however, is the fact that it is impossible to carry through such a suggestion for the following reasons:

1. The North American continent (north of Mexico) was intentionally selected as the geographic unit. Thus, Canadian Indians are treated here as well.

2. The schedules in outlining any subject area always progress from the general to the specific. The general numbers for United States History have been created in the E151–1 area. To move up the beginning of the history section so that it began with Indians of North America at E75 would destroy the inner logic of the schedule.

3. The area between Indians of North America and United States History, that is, E101–143, captioned “Discovery of America and Early Explorations” and “Descriptive Accounts of America,” is still a general section which applies to the entire Western Hemisphere. This would mean, for example, that Columbus’s discovery would be called United States history, a rather embarrassing situation.

**Indians of North America versus American Indians.**—The caption for E75–99, “Indians of North America,” cannot be changed to “American Indians,” for the latter term in our system represents the collective term for all of the aboriginal peoples of North and South America. The general section for the entire group, as stated above, is E51–78. “Indians of North America” was used because North America (north of Mexico) is the precise geographic area with which the schedule deals.

**Indian Wars, E81–83.895.**—Since this section is reserved specifically for Indian Wars, and listings of individual Indian Wars, it is not astounding that the last entry should date from as far back as 1898. We have cataloged no book on a war fought since that date. This area was never intended to represent a general history section. It is true, as Mr. Yeh pointed out, that there is no class number standing for history since 1900; but it is also true that there is no general history number for works covering the pre-1900 period. In view of Mr. Yeh’s suggestion we are considering the advisability of establishing a general history number at E80. Certainly, an expanded development for history is unnecessary; very few history texts which can be differentiated from general works on Indians are received. And works on general Indian history dealing specifically with the twentieth century are virtually nonexistent. Tribal histories pertaining to this period are received, naturally. However, in accordance with the prefer notes written into the schedule, works are never classed in general numbers, including class

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numbers and the Cutter arrangement for special topics, if they pertain to specific tribes or geographical areas, but instead are classed with the tribe or area in E99 or E78 respectively.

Massacres versus Incidents.—It is an LC cataloging requirement that when the name of an individual historical event is to be established, the criterion for the selection of the name must be that it represents current usage in the field. That is, events are not named according to what it is polite or ideal to call them, but according to what they are actually called by authorities in the field. Therefore, the names of special engagements which have been named “massacres” must stand. We note, as an example, that the 1967 edition of Encyclopaedia Britannica in almost every instance also refers to the engagements we call massacres as massacres.

Special topics under 20th Century.—The proposal was made to call E81-87 History to 1900, and E88.4, Twentieth Century History, by subjects, A-Z. Such an arrangement is not possible in view of the fact that the provision for special topics has already been made in E91-98. A second topical arrangement at this new location could only destroy the logic to the internal arrangement of topics within the entire section.

Provision for civil rights.—It is perhaps possible to establish a Cutter number for civil rights in the Cutter table for special topics under E98. This would perhaps meet Mr. Yeh’s suggestion that a topic so crucial to Indians of the United States today be provided for in the classification schedule. Books on the topic are now being classed in E93, Relations of Indians with the United States Government. We have always felt that such works are better classed here since any solution to the problems of civil rights will require governmental action, and most of the struggle on the part of the Indians today to achieve justice is with the government. The note under E93 in the schedule is instructive, since among other items to be classed here are listed: Indian Rights associations, treatment of Indians, etc.
Acquisitions in 1970

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Finances

FUNDS FOR THE DEPARTMENT OF HEALTH, EDUCATION AND WELFARE for fiscal 1970 were finally appropriated by HR 15931 (PL 91-204), which was signed by the President in March. This bill replaces HR 13111 which was vetoed by the President on January 28. The new bill appropriates $713 million less than HR 13111. Appropriations involving libraries are: ESEA Title II, $42,500,000; LSCA, $43,266,250; HEA Title II, $21,626,450. Library recipients of funds under ESEA should note that PL 91-230 allows state and local officials to spend money appropriated for all USOE administered programs for this fiscal year, 1970, in the following fiscal year.

Fiscal 1971 funding for education programs was provided when HR 16916 became law (PL 91-380) on August 18, with a final appropriation of $4,420,145,000. The Senate rejected President Nixon's appeal to cut domestic spending, overriding his veto of the 1971 Education Appropriations by a 77–16 (15 more than needed) roll call vote. The House had previously voted 289–114 (20 more than needed) to override the Presidential veto. The bill as passed contains $453,321,000 more than the President had requested for fiscal 71. Some of the library acquisitions-related funding appropriations are: ESEA Title II, School Library Resources, Textbooks and other Instructional Materials, $80,000,000; LSCA, $47,801,500; HEA Title II, Part A, College Library Resources, $15,325,000; and Part C, Library of Congress Acquisition and Cataloging, $6,613,500. Overall funding for three major library programs is $48 million more than it was for 1970. “Full appropriations for formula grant library programs (ESEA II and LSCA) for FY 1971 will be released, but for the time being only $9.9 million (the President’s budget request) will be released for HEA II-A instead of the $15,325,000.00 appropriated by Congress.”

The Library Services and Construction Act is extended for five years (through 1976) by S. 3318, passed by the Senate on September 21. A five
percent annual increase is authorized from 1972 on. The House passed
its amended version of the bill under suspension of rules on December
7, and it was finally approved by the Senate on December 15 and cleared
for Presidential signature.8

The fact that the new LSCA bill does not provide a new source of
revenue for the urban public libraries may be very important since ad-
vanced stages of the recession disease will be felt most acutely at the
state and municipal levels. Library Journal (LJ) reported in July that
the twin pincers of inflation and budget cuts were beginning to affect
some libraries painfully. Some specific cases of cuts in hours open and
book budgets plus the limited number of jobs available are cited.9 In the
October 1 issue, LJ reports on a telephone survey of conditions in pub-
lic libraries in the Northeast. They found that some libraries were in
trouble and some were thriving. LJ's conclusion was: "If and when re-
cession cuts municipal revenues seriously and that could be next year,
the study could be quite a different one."10

Meanwhile, the Carnegie Commission on Higher Education tells us
that all is not well with respect to finances in academe. Their study of
forty-one private and public colleges and universities located in twenty-
one states and the District of Columbia concludes that the gap between
income and expenses at these institutions continues to widen. The report
indicates that colleges and universities are responding to the crisis by
postponing the start of new programs, by cutting back existing pro-
grams, and by shifting funds from lower priority programs to those
with higher priorities. The Commission is concerned that budget trim-
ning will impair the academic soundness of the institutions involved.11

The Nixon administration, becoming increasingly concerned with re-
election, will be making attempts to buffer the economy, and hopefully,
the results of these efforts will be felt in libraries before any more li-
braries are forced, as one administrator put it, to pay mandatory wage
increases out of book funds.

Serial Prices

Periodical prices are still rising and the ratio of increase accelerates
each year. "Price Indexes for 1970," in the July issue of Library Jour-
nal, sets the annual increase in periodical prices as 11.8 percent over the
1969 figure, producing an average of $10.41 for 1970 as compared to
$9.31 for 1969. Since the base years of 1957-59, the index for U.S. peri-
odicals has risen to 211.6, with an average annual increase of 9.3 per-
cent.12 Serial services, combined, rose to $85.44 from $78.79 in 1969 to
reach a new index high of 214.7 for the year 1970.13

Book Sales

A Drug Trade News annual survey of consumer expenditures in
drug stores reported paperback sales at $127,610,000 for 1969. The re-
port says that this accounts for 41 percent of all consumer expenditures
on paperbacks through all outlets.14
Portions of a marketing study prepared for Miehle-Goss-Dexter in 1968 by Battelle have been selectively presented to the book producing industries. Of interest to librarians are the following points, taken from a summary by Victor Strauss: (1) books will continue to exist in about the same physical configuration well into the twenty-first century; (2) the projected growth for textbooks is from $701 million in 1968 to $2 billion in 1990; and (3) trade books will exhibit an upward trend until the 1980s and then level off due to the following factors—home facsimile, CATV, commercial television, video tapes, and increasing travel and competition for the customer's time from other recreational activities.

Book publishers' estimated dollar receipts were up 6.4 percent for 1969 over 1968. Receipts totaled over $2.75 billion dollars, with increases in all categories except children's books over $1.00, bibles, prayer books, missals, etc.

Price increases are not confined to book trade materials as a perusal of USBE's new price (or rather, handling fee) schedule shows. Even with these increases their material is still a bargain.

Copyright Revision

The Senate Subcommittee on Patents, Trademarks and Copyrights reported out a bill on December 10, 1969, containing complete provisions for CATV as well as photocopying. In a letter to the editors of Publishers' Weekly, Verner Clapp, signing as Chairman, Copyright Committee, and Stephen McCarthy, signing as Executive Director of the Association of Research Libraries (ARL), set forth the objections of ALA and ARL to the bill. "The position of the library associations on S. 543 is: 1. Section 108 (d) (1) in its present form is unacceptable: 2. Section 108 (d) (1) should either a) be deleted; or b) amended by the addition of the following clause: 'or has certified in writing to the library or archives that such copy will be used in accordance with Section 107.'"

Dan Lacy, signing as Chairman, Copyright Committee, Association of American Publishers, in another letter to the editors of Publishers' Weekly, makes the following point: "Any copying a library may legally do now under the doctrine of 'fair use' or otherwise, it can continue to do under Section 107. Section 108 is additional authority to do copying which would not already be justified under the doctrine of 'fair use.'"

The library-publisher debate is not the prime reason for the failure of the Senate to come to grips with copyright revision; CATV is still the issue which remains unresolved. On December 7, 1970, the House approved SJ 230, which extends the present copyright for another year, the sixth such extension. Representative Celler (Dem., N.Y.), noting that the House has already passed a revision measure and is awaiting Senate action, stated that this is to be the last of the extensions. Celler was referring to HR 2512, passed in 1967 by the House, and then referred to the Senate where action was deferred after extended controversy over CATV. S. 543 dies with the Ninety-first Congress but Senator McClellan has promised to introduce a successor bill in the new Congress.
Approval Plans and Blanket Orders

The literature presented more discussion and brought more evidence to bear on the question of approval and blanket order plans. Roscoe Rouse, through the auspices of College & Research Libraries (CRL), shared with us the paper that he read at the Second International Seminar on Approval and Gathering Plans for Large and Medium-Size Academic Libraries. Rouse’s paper won little approval; rather, it stimulated seven pages of critical comment, published subsequently in CRL September 1970. The response to Rouse’s article indicates that those who have persevered in the development of their approval plans seem satisfied with them.

A survey by Norman Dudley on the use of approval plans and blanket orders by ARL libraries revealed that the chief advantages perceived were: (1) prompt receipt of materials; (2) broader, more consistent coverage; and (3) elimination of individual order preparation. The chief disadvantages perceived were: (1) too much unwanted material; and (2) storage and handling problems created by the volume of material.

Robert Wedgeworth, in “Foreign Blanket Orders: Precedent and Practice,” after a lengthy introduction covering such plans in general, sets forth the result of a survey attempting to answer the question, “What are the characteristics of blanket orders?” The survey “attempted to identify American and West European booksellers who provide foreign publications on blanket order plans.” Although the survey deals with the subject only from a dealer’s point of view it contains valuable, practical information for any acquisitions librarian contemplating such a plan.

Another article, by Betty J. Meyer and John T. Demos, examines another facet of the subject of approval plans. The authors discuss the place of approval plans in a university with very large budgets and conclude that on the whole approval plans are worthwhile and that faculty members must be convinced by librarians of the value of such plans.

Faculty, librarians, and book jobbers were compared in terms of their ability to select titles which would match the actual needs of users in a research project conducted by G. Edward Evans. The major hypothesis was that the group with the greatest number of patron contact hours would select the highest percentage of titles actually circulated. The findings rank librarians, faculty members, and book jobbers in that order.

Marion Wilden-Hart, in a thought-provoking article on approval plans, discusses all aspects of such plans, including bibliographies and the long-term effects of approval plans. The author concludes that “the time is now ripe for research to be taken into: (1) which approval plan method is most suitable to special types of libraries; (2) what methods are used to follow up approval plans by bibliographers; (3) the economics of approval plans; and (4) the long-term effects of approval plans on the nation’s resources.” A tall order, but certainly in order.
Reprints

The reprinting of books continues apace. Carol Nemeyer, Columbia doctoral student, identified 269 reprinters and estimated that at least 85,000–100,000 titles have already been published in reprint form. In his article, "Purchase of Out-of-Print Material," Felix Reichmann writes that forty-nine libraries (75 percent of those responding to his questionnaire), report that they check reprint catalogs before giving an order or a search request to an O.P. dealer. Complaints about the prices of reprints continue. In addition to Reichmann, Stanley Crane, writing to Library Journal comments on the problem, citing specific publications reflecting "markup over printing costs that is indefensible in the extreme." Furthermore, Crane predicts that continuation of the inflated prices can only lead to trouble. Certainly, problems in academic library funding will have an effect on the reprint market.

Criticism of the book trade by librarians seems to have been aimed primarily at the reprinter during the last few years, but another profession has some complaints. The activities of the Special Committee on Law Book Publishing Practices, formed by the American Bar Association, will be of interest to all librarians. The committee will investigate undesirable law book marketing practices. Among the most commonly criticized practices are "falsely advertising old books as new; reselling old books disguised as new ones, with changed titles and fresh bindings; including the same book in different sets; failing to issue needed supplements, or overpricing them; using unnecessarily expensive bindings on books which are soon out-of-date; and failing to advertise prices of the more costly works." Textbook publishers too will be interested in the activities of this committee, particularly with the criticism on using unnecessarily expensive bindings on books which are soon out-of-date.

International Standard Book Numbers

International status was conferred on Standard Book Numbers during the twelfth plenary session of the International Standards Organization, Documentation Section, held in Stockholm in October 1969. Sixteen major book publishing countries recommended and later adopted ISBN. There is or will be, in each country, an agency responsible for coordinating the assignment of ISBN's to publishers. In the United States this organization is the Standard Book Numbering Agency, a collaborative effort of the American Book Publishers Council, the American Educational Publishers Institute, the American Standards Association-Committee Z39, the Library of Congress, and the R. R. Bowker Company. In an editorial published in September, Publishers' Weekly reports: "By now, every title in the British National Bibliography has a standard book number and it is expected that 70% of the titles in this year's edition of Books in Print, the U.S. bibliography, will have ISBNs." A working group from International Standards is to prepare a manual for the universal application of International Standard Book Numbers.
Numbers. This should help standardize the application in each nation. ISBN should become a bibliographic Esperanto. The Library of Congress, at the request of the Standard Book Numbering Agency, will convert SBN's appearing in books into ISBN's. For American, British, Canadian, Australian, and New Zealand publications this will mean that on catalog cards the prefix ISBN will replace SBN and an initial zero followed by a hyphen will precede the SBN number appearing in the book.38

More Numbers

It is fitting that math books should have more numbers on the verso of their title pages than books about other subjects. The American Mathematical Society has requested that authors classify manuscripts according to the AMS subject classification scheme, to assist the Library of Congress in the precise assignment of LC and Dewey class numbers. Thus one may find on a verso, a SBN or ISBN, LC card number, and the AMS number which would be formatted as follows: AMS (MOS) 1970 Subject Classifications 14C05, 14C15, 14C30.39

Association of American Publishers

A new publishing industry organization known as the Association of American Publishers resulted from a merger of the membership of the American Book Publishers' Council and the American Educational Publishers Institute. Many large firms were formerly members of both organizations, and the merger was natural since there had been considerable joint and overlapping activity.40

Theft of Books

A new twist in acquisitions was revealed in an article in Publishers' Weekly commenting on a story in the New York Times of December 2, 1969. "Some New York City booksellers," Publishers' Weekly goes on to say, "actually place 'orders' with accomplished thieves who go out and acquire these titles at other local bookshops in the city. Cy Rubin, president of Bookmasters quoted in the article, said, 'I'd say that at least 90% of our shoplifting losses . . . come from professionals who have been sent out by dealers with specific orders to steal books or . . . professionals who know which dealers are in the market for which books.'"41 Charges were brought against a second-hand book dealer on 23rd Street and another against a 42nd Street bookstore. It is to be hoped that ownership stamps, bookplates, call number labels, and similar devices will protect library books against such depredations.

Stechert-Hafner

In 1970 Stechert-Hafner began to concentrate almost exclusively on its foreign book and periodical subscription activities and no longer accepted orders for American books published in the United States. It will, according to Publishers' Weekly, "continue to accept orders for Ameri-
can serials and continuations . . . and provide publications from developing countries and foreign reference and scholarly works from all over the world."\(^\text{42}\)

**Preservation of Library Materials**

A Preservation Research Office has been established in the Library of Congress to carry out research in the preservation of library materials. Located in the annex of the Library of Congress, the laboratory will investigate problems of the preservation of paper, adhesives, bookbindings, microfilm, magnetic-tape, and motion picture film. The laboratory will also test and evaluate materials, equipment, and methods used in preservation.\(^\text{43}\)

**College Booksellers**

A new list of 40,000 books to serve as a core collection for college libraries will be available in 1971. Selection of titles will be made by *Choice* reviewers under the supervision of Peter Doiron. ALA will publish the book catalog, with the assistance of funding from the Council on Library Resources where the project was developed. "The new list," says ALA, "may lend itself to production, by commercial book jobbers, of package library programs which could be delivered ready for shelving, either complete or in a phased program. The latter feature would be made possible by assigning titles to four categories representing relative importance."\(^\text{44}\) This type of collection building is, of course, anathema to the collection building purist, but it will probably be a godsend to many a poor devil starting one of the new college libraries springing up throughout the country. With the core collection an accomplished fact, the librarian of a new college can then devote his time to developing his collection.

**Corporate Mergers and Sales**


**Book Production and Prices**

The February 9 "Annual Summary" issue of *Publishers' Weekly* showed 29,579 titles published in 1969. This figure represents a decrease of 806 titles from the total of 30,387 in 1968. *Publishers' Weekly* reports that "a plateau in the output of book titles by American publishers appears to have been reached and sustained over the past two or three
years.” The decrease in the total number of titles was, unfortunately, not matched by a similar decrease in price per title. The average price of a selected hardcover book increased 10.6 percent in 1969 (from $8.47 to $9.37). The previous year’s increase had been only 6 percent. The mass-market paperback average price increased to $.91, and the trade paperback increased 16.8 percent (from $3.05 in 1968 to $3.58 in 1969).47

Taxes on Unsolicited Review Books

An unidentified newspaper reviewer asked the Department of Internal Revenue whether he should report as income unsolicited review copies which he received. IRS ruled (Ruling 70-830) that review copies were taxable. This ruling was then modified by the new Revenue Ruling 70-498, which says that review copies are taxable only if sold—or if donated to a charitable institution and claimed as an income tax deduction.48 This may mean a decrease in gift books to libraries.

Small Orders

A bookdealer reported to Publishers’ Weekly that certain publishers, upon receiving single-copy orders from a dealer, refuse to accept such orders and return the orders with a comment such as “this order is too small to fill, please combine,” or “five copies (ten copies) single/assorted minimum.”49 Although it is likely that the offender was a mass-market paperback publisher, it is a trend to be deplored, and perhaps should be the subject of a discussion at an appropriate committee meeting at the next ALA convention. If the order is for a popular title, the dealer will probably comply with the publisher’s demand but if not, then the library will be the loser. This is not to blame the dealer; he is in the middle.

Photocopying—Copyright

As of the date this article went to press the question of photocopying copyrighted material had not yet been resolved. An article clearly setting forth the case for the publisher appeared in Publishers’ Weekly early in the year. William M. Passano, president of the Williams and Wilkins Company of Baltimore, states his case succinctly when he says, “We simply want to be reimbursed by those who are copying our publications.” He indicates that many scientific journals will perish if publishers fail to “receive an additional payment which reimburses us for the loss in subscription revenue.”50 The solution, to him, is obvious: “As long as the library can copy without charge, it will do so, but if it is required to pay for the privilege, it will simply add another item to its budget.” If he were a library director working up his next budget he might play a different tune.

Media

CBS and Time-Life are among the more prominent entries into the video tape production market. Numerous companies have announced
plans to produce a variety of video player systems. A *Library Journal* editorial suggests that the Library Technology Program or some other ALA agency concern itself with the standardization of video tape equipment now, before there is a plethora of different systems on the market.51

USOE continues funding for the Educational Media Selection Centers program, designed to identify, develop, and evaluate existing centers that provide teachers, librarians, and others responsible for education, from preschool through adult level, the opportunity to examine and preview, prior to selection and purchase, both print and nonprint materials.52

The University of Toronto Press announces plans to publish new titles and editions simultaneously in standard microfiche and hard copy form. Prices will be the same for either medium. Presumably readers will soon see book pages massaged on to the screens of their TV sets. CBS, in concert with a number of other companies, including publishers Librairie Hachette and Mondadori, is developing a system of reproducing the printed page on the television screen.53 One wonders if the price will be the same for cassette and hard copy.

**Cataloging in Publication**

Representatives of publishers, libraries, and service agencies, meeting in New York, September 21, concluded that the process of "phasing in" publishers to CIP had not been worked out and that the requisite LC staff would have to be built up.54 If CIP is started, publishers will send galley proofs to a special unit at LC which will provide basic cataloging information within a week and return the information with the galleys to the publisher. The publisher will then print subject entries for headings, Dewey and LC numbers, title, and author entry on the verso of the title page of the book.55

**Significant Publications**

Of interest to serials librarians and searchers is the publication of the *American National Standard for the Abbreviation of Titles of Periodicals*. This publication was prepared by Subcommittee 3 of Committee Z39 under the chairmanship of James L. Wood. It is a revision of the 1963 standard, *Periodical Title Abbreviations*, and culminates a two-year effort by the joint American National Standards Institute-British Standards Institution to develop an Anglo-American periodical title abbreviation standard.56

Congratulations are in order for the editors of *Books in Print (BIP)* for their concise reporting of their error sampling of the 1969 *Books in Print*. Running items taken randomly from *Publishers' Trade List Annual (PTLA)* against BIP, they found a range of 2.1–8.1 percent error due to omissions of authors and titles. They also checked for author error, title error, date omission, date error, price omission, price error, and

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miscellaneous. The total of all types of errors was calculated to be 8.8 percent of their sample of 2,000 items from *PTLA*. It is to be hoped that the computer/programmer can be kept under control in the future.

**Postal Rates**

In passing HR 17070 (PL 91-375) Congress creates an independent U.S. Postal Service, eliminating political influence over rates and classes of mail and postal operations. Libraries will not experience any immediate changes since the bill did not include any of the postal rate increases which had been requested by the President. Congress retains the right to authorize public subsidy for reduced mail until at least 1984, and must appropriate the funds required to make up for the lost revenues. Uniform mailing rates, regardless of zone destination, are important to libraries. It appears that they will remain uniform but will eventually increase. If the Postal Service is ultimately to become self-supporting, as is the intent of HR 17070, both special fourth-class book and educational materials rates and special fourth-class library rates will certainly be increased. Should Congress decide to subsidize them, libraries may be insulated from the effects of these increases until 1984.

**REFERENCES**

6. Ibid.

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Serials: A Review of 1970

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REVIEW ARTICLES: they were a "natural" following the end of the decade with such a proliferation of a new style of publication. "Little magazines" were certainly a fact of the fifties but the sixties brought the "underground press," the "alternative press," and "dissident literature." The collection, preservation, and cataloging of such periodicals were the concerns of all levels of technical services personnel involved with serials work. "Publications of the Counter Culture" by John R. Douglas, Wilson Library Bulletin (December 1970), introduces "tribal literature" with an annotated list of periodicals/newspapers complete with addresses and prices. American Libraries (January 1971) covered this literature in "Anima Rising: Little Magazines in the Sixties" by Len Fulton.

Novel in distribution (it was distributed at the New Librarians Section booth, 1969 Pennsylvania Library Association annual conference) and important due to its inclusion in a state library association periodical is "A Glance at the Underground Press" by Norman Horrocks. Freedom of Information Center report no. 226 (School of Journalism, University of Missouri at Columbia) was "The Underground Press," a report by Jack A. Nelson. A fourth edition of The Underground Press Directory lists 671 publications.

Supplementary sources which should be noted are: Robert J. Glessing's The Underground Press in America (Indiana University Press); Alternative Press Index, a quarterly; and Index to Little Magazines, 1966-1967 (Swallow Press) compiled by Evelyn G. Laur. The preface states "the literature of the little magazines is now indexed from 1943 through 1967." Micropublication of over 200 underground newspapers has been undertaken by Bell & Howell, with the cooperation of the Underground Press Syndicate.

Management of Serials

Serials Publications in Large Libraries, edited and with an introduction by Walter C. Allen, is an indexed collection of eleven articles ranging from "The Serial's Perplex: Acquiring Serials in Large Libraries" by Peter Gellatly and "Serials Cataloging Revisited" by Kathryn L. Henderson, to "Service" by Warren B. Kuhn. The automated
serials control system at the New York State Library received attention in two articles in the July 1970 issue of The Bookmark. Under development since 1966 and with a redesign phase completed in 1969, the project can now boast that “conversion of records in machine-readable form was completed in May 1970 for the State Library’s 10,000 currently received serials (exclusive of government document serials).”

**Bibliographic Data**

“Progress Toward a National Serials Data System” by Scott Adams, Library Trends (April 1970), gives the background of systems development important to the recording of serials data and raises questions of concern to the future of such programs, e.g., “Do we want a national system for purposes of locating serials holdings?”

Current attempts at the recording of serial information were discussed at the June 1970 meeting of the RTSD Serials Section Discussion Group for Large Research Libraries. A review of this meeting can be found in the Library of Congress Information Bulletin, August 6, 1970; of special note is the progress of the National Serials Pilot Project reported by Donald Johnson. “Applying the MARC Serials Format to data from the Canadian Union List of Serials and Index Medicus, information on scientific and technical serials is being gathered, verified, and input into a central store of machine readable data.”

The latest comment on the Standard Serial Number (SSN) can be found in the Report of the Library of Congress to the Association of Research Libraries meeting in Los Angeles, California, January 17, 1971. Following adoption as a standard by the American National Standards Institute on November 18, 1970, and submission of a proposal to the Council on Library Resources requesting funds to support assignment of SSN’s to all new serial titles, and “in anticipation of a favorable response, all new titles cataloged by LC or reported to LC by other libraries are being coded, on an experimental basis, in the MARC serials format.”

**Serials Lists**

The second edition of the Union List of Serials of the Consortium of Universities of the Washington Metropolitan Area includes the current and retrospective holdings of serial publications in the libraries of the American University, Catholic University, George Washington University, Georgetown University, and Howard University. The cutoff date for recording of holdings was August 1970.

The second edition of The Intermountain Union List of Serials, representing the participation of forty-one libraries, has been issued with out-of-Arizona distribution set at $40 per copy. All sales receipts go into project funds for the production of a supplement and the continued maintenance of the data.

The library catalogs of the Hoover Institution on War, Revolution, and Peace, Stanford University, representing holdings of the Western

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language serials and newspaper collections, was issued in 1969 by G. K. Hall, Boston, in three volumes.

Also available: Serials Holdings List of the UCLA Biomedical Library and the fifth edition, Union List of the Scientific and Technical Serials in the University of Michigan Library.

Illinois Libraries, June 1970, is devoted to “Newspapers in the Illinois State Historical Library,” with a break-down as to Illinois papers, out-of-state papers, and various interesting but smaller categories such as soldier and ordnance papers, campaign newspapers.

Production Factors

“Newsmagazine size is fast becoming the ‘standard’ size for the industry,” (of periodical publishing) reported Newsweek in the January 18, 1971, issue. Cutting costs of paper used will hopefully save some magazines from demise. The projected rise in postal rates for second-class mail (based primarily on weight) has prompted editorials in media publications. [cf. “Postal Rates and Periodicals,” Saturday Review (November 14, 1970).]

Foreign Serials

The Law Librarian, bulletin of the British and Irish Association of Law Librarians, has just been added to the literature according to Library Journal (July 1970).


Compiled by the African Section of the General Reference and Bibliography Division, Library of Congress, is Sub-Saharan Africa: A Guide to Serials. This guide includes 4,670 entries representing serials published before 1969 in western languages and in African languages using the Roman alphabet. Most of the titles are held by the Library of Congress and other American libraries represented in the National Union Catalog.

Indian Periodicals: An Annotated Guide was compiled and edited by N. N. Gidwani and K. Navlani with publication in Jaipur, 1969, offering “the most complete picture of the present Indian situation in the field of journal publishing in English.”

The Serial Division, Library of Congress, has published in six volumes James B. Child’s Spanish Government Publications After July 17, 1936 To Date.

One thousand serials published outside of the Soviet Union in Russian are listed in Part 1 of a bibliography Half A Century of Russian Serials, 1917–1968: Cumulative Index of Serials Published Outside of the USSR, Michael Schatoff, compiler; N. A. Hale, editor.

Standards

The Library of Congress Information Bulletin (January 14, 1971)

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reports "The Ministry of Science and Technology of the German Democratic Republic has approved standards concerning short titles of periodicals in the Roman and Cyrillic alphabets, to be applied in the Subject Group 152: Information, Documentation, and Libraries (TGL . . . 20 969, Gruppe 571).

American National Standard for the Abbreviation of Titles of Periodicals,12 a revision of the 1963 standard Periodical Title Abbreviations is the result of a two-year joint effort on the part of the American National Standards Institute and the British Standards Institution. James L. Wood, librarian at Chemical Abstracts Service was chairman of Subcommittee 3 of Committee Z39, American National Standards Institute which prepared the publication.

Acquisitions

The January 1970 issue of Library Trends entitled "Problems of Acquisition for Research Libraries" includes a lengthy contribution from William H. Huff on serials acquisitions which points out some of the concerns of this area, due to "the increasing numbers published, rising subscription costs, and the generally heightened complexities in handling and processing this form of publication."

A news release from the R. R. Bowker Co. remarks that the 1970 Supplement to Ulrich's International Periodicals Directory contains information on over 5,000 periodicals, with an increase in coverage of scientific and technical periodicals from Japan as well as Latin American periodicals. There is a separate listing of 500 periodicals which have ceased publication or changed title since the base volumes of the 15th edition were issued in December 1969.

A three-year cumulative edition, 1966–1968 of New Serials Titles was issued in March 1970 by the Serial Record Division, Library of Congress. The "outside library entries were increased to 4,148, and many of these described important periodicals which were listed in NST only a few months after they were published." The decennial cumulation, 1961–1970, is forthcoming, as reported in the Report of the Library of Congress to the Association of Research Libraries. . . .13 "low bidder was Rowman & Littlefield. The cumulation . . . should be available late in 1972."

Specialized Publications

Subtitled "the story of specialized publications," Magazines for Millions by James L. C. Ford is a recent publication of Southern Illinois University Press and Feffer & Simons. The "requisites to the birth of a publication" are concisely noted in a foreword by Howard Rusk Long.

A Checklist of American Musical Periodicals, 1850–1900 by William J. Weichlein, issued by Information Coordinators, Inc., as Detroit studies in music bibliography, 16, points out that "music periodical literature of the nineteenth century was one of the first sources of music education."

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Early Literary Magazines of Texas,\textsuperscript{14} by Imogene B. Dickey is a regional, historical overview of forty magazines published in Texas from 1858 to 1929 (from over three hundred studied).

The American Library Association published in the fall of 1970 Serial Publications in the British Parliamentary Papers, 1900–1968: A Bibliography by Frank Rodgers. An ALA advertisement states that "it is the only complete guide to the full range of material issued by various government departments for presentation to the House of Commons."

Costs

"Price Indexes for 1970: U.S. Periodicals and Serial Services," as published in Library Journal (July 1970; periodicals by Helen W. Tuttle; and serial services by Norman B. Brown and William H. Huff) again indicates rising prices for serials. "The average price of U.S. periodicals for 1970 made a phenomenal leap of $1.10 over the average price for 1969. . . . To emphasize today's accelerated inflation two figures can be quoted. First, the percentage increase of 1970 prices (average $10.41) over 1969 ($9.31 average) is 11.8 percent, some 2.5 percent higher than the average annual increase for the past decade. Second, the index for 1970, if computed on the base years 1967–1969, is 120.2, while the 1960 index, computed on the base years 1957–1959, is only 108.1. That is, comparing the two years in terms of their three preceding years gives 1970 a 12.1 percent greater increase than 1960. Serial services have followed the same path, with the 1970 index at 214.7, more than double the base figure. With the average price of the services at $85.44, the situation for libraries is indeed alarming."

Beginnings:

A selection of serials which began publication during the past year, some reflecting social concerns, and some totally new areas of human interest are the following:

- The Press in Europe—current data on more than 1,200 publications, most of which are newspapers, in thirty different European countries (R. R. Bowker).
- The Science Fiction Hall of Fame—chosen by members of the Science Fiction Writers of America (Doubleday).
- The Dreiser Newsletter—v.1, Spring 1970 (Indiana State University: English Dept.).
- New Slavic Publications: A Guide to Selection and Acquisition in the Social Sciences and Humanities (Slavic Bibliographic and Documentation Center of the Association of Research Libraries).\textsuperscript{15}
- Chicorel Theater Index to Plays in Anthologies, Periodicals, Discs & Tapes (Chicorel Library Publishing Co.).

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In Summary

Strong interest in serials has continued through the past year as evidenced by both the professional and lay press. Continuance of the more familiar items of serial literature has been scrutinized, making necessary, in several instances, changes in format. The news of these changes must be taken along with the announcement that Kids, a monthly children's magazine, will be produced by school children, aged 5 to 13, thereby introducing the next generation to one level of serials. An older group perhaps will be looking forward to the June 1971 return of a quarterly Saturday Evening Post, complete with Norman Rockwell cover illustration. Two Standard Serial Numbers, please!

REFERENCES

4. Alternative Press Index. Issued by the Radical Research Center, Carleton College, Northfield, Minn. 55057 (subscriptions $30.00; $10.00 to individuals).
5. Serials Publications in Large Libraries, no. 16 in the University of Illinois Graduate School of Library Science's Allerton Park Institute series. Available from Illini Union Bookstore, 715 S. Wright St., Champaign, Ill. 61820 for $4.50.
6. Distributed by the Catholic University of America Press, Washington, D.C. 20017, the print-out, paperbound list is available for $20.00.

7. Order from Arizona State University Library, IMULS Project, Tempe, Arizona 85281.

8. Address: Mrs. Nancy Braultz, UCLA Biomedical Library, Center for the Health Sciences, Los Angeles, Cal. 90024 and enclose a check for $20.00 payable to Regents of the University of California.


10. Available from U.S. Superintendent of Documents for $5.25.

11. Published by Russian Book Chamber Abroad; the paperbound bibliography sells for $13.85.


14. Published by the Steck-Vaughn Co., Austin, Texas, for $5.95.

15. Issued by the Slavic Bibliographic and Documentation Center of the Association of Research Libraries, 1527 New Hampshire Ave., N.W., Washington, D.C. 20036. The first three issues were distributed free; v.2, no.1–Sept. 1970–are priced at $5.00 for individuals; $10.00 for institutional subscriptions.

16. Free to members; subscriptions $5.00 from Louise Shelledy, Editor, NLA Quarterly, 3420 So. 37th St., Lincoln, Neb. 68516.

17. Free to individuals; libraries may receive it on an exchange basis from Dr. Bernth Lindfors, Editor, Research in African Literatures; African and Afro-American Research Institute, 2609 University, No. 314, University Station, Austin, Texas 78712.

The Year's Work in Cataloging and Classification

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This has been the year of exasperation. The marathon membership meetings at the Detroit convention of the American Library Association severely curtailed the programs and work sessions of the Cataloging and Classification Section along with most other sections and divisions. It was exciting to have the opportunity to stand up and be counted, to watch one's roommate cancel out one's own vote, to join interminable discussions at every turn, and to see how democracy works to achieve consensus (the mills of the gods grind slowly and how!—but they do grind exceedingly fine), but it was not a time for that intellectual stimulation that usually comes from good program meetings because too many of these were cancelled.

It was a disturbing time in that extremists were overheard complaining that democracy did not work because their extreme position was not supported. Dramatic and highly emotional events livened up the profession to a degree not seen before. It is safe to say that there were hardly any neutral librarians in the membership meetings. The "stand-up-and-be-counted" process gave the rank and file librarian, including me, a chance to feel that, in reaching conclusions as to what should be the policies of the American Library Association, the decisions were made by "us" and not "them." Undoubtedly there will be more of this at Dallas as we decide our priorities and directions for the next decade, but hopefully the goings-on will be kept within more reasonable bounds so far as time is concerned.

The disruption of normal methods of operation forced the Section's working committees to rely on communications between meetings to a greater degree than has been necessary in recent years. Details will not be given here of all committee activities, but a few highlights will be mentioned. The Section continues to concern itself with bibliographical representation standards for machine-readable book and nonbook materials. The Canadian cataloging guide for nonbook materials has been accepted as an interim working manual until a joint ALA/CLA committee can consider what, if any, revisions or additions
need to be made. Needless to say, as with the Information Science and Automation Division, the Cataloging and Classification Policy and Research Committee recommended that the "type of activity" division be continued in the Association. The thought of being cut off from catalogers in types of libraries other than the one with which a person is associated is gruesome.

Another change this year has been the arrival of the buyers' market. The employer now interviews the prospective employee instead of vice versa. At least one recruiter has been heard to equate all types of master's degrees when hiring professional librarians, thus confirming what many have suspected: the library degree does not confer that much of an advantage over another type of degree in a working situation. A rethinking of goals and methods is especially necessary in the field of cataloging and classification because so many management-oriented administrators are questioning the need for care and thoroughness at input. The computer saying, "garbage in, garbage out," applies to our field as well; also, a corollary, "nothing in, nothing out." Ten cents saved in the Catalog Department can be ten dollars lost in Reference.

As always, the library schools welcome constructive suggestions on how to teach fundamentals painlessly for students going into a wide variety of library situations. Very little appears in the literature on what is a minimal acceptable performance for new and inexperienced catalog librarians. The students rebel at learning the bare bones and nitty gritty, while employers virtually froth at the mouth because the new graduate cannot "do anything." Is an internship year the answer?

On the research side, most of the very original and interesting work has come from England. The publication of the first two research pamphlets of the Library Association is a milestone. (Laying hands on them is also a milestone since orders sent to England end up at the door of a distributor in Illinois who, so far, has not been too lively at distributing.) The pamphlets are being reviewed for this journal so that only bare mention will be made here. Library Association Research Pamphlet No. 1 is called Classification and Information Control: Papers Representing the Work of the Classification Research Study Group during 1960-1968. Its 130 pages include proceedings of the 1968 conference in London on "Some Problems of a General Classification Scheme," nine studies by Helen Tomlinson undertaken under the direction of the Group beginning in 1967, and five papers by Derek Austin who was released part-time from his work at the British National Bibliography. The work was supported by a grant from the North Atlantic Treaty Organization. The purpose was to "test and demonstrate certain principles on which a general classification scheme might be constructed by using material from limited areas of knowledge." Among other things, the new scheme aimed at abandoning traditional main classes. Both writers, and especially Austin, examined the theory of integrative levels. They worked constantly with members

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of the Group, as the CRG Minutes show, and, as a result, some new views on classification have been forthcoming, quite different from those displayed at the London conference.

Library Association Research Pamphlet No. 2, by Douglas J. Foskett, is entitled Classification for a General Index Language: a Review of Recent Research by the Classification Research Group. It is essentially a clear and very interesting explanation of "where we are now." The author notes in his introduction that this is a short and simplified introduction to the reports of Pamphlet No. 1. It is recommended that the reader begin here and read No. 2 before No. 1.

Other important work from England includes the British National Bibliography MARC-inspired indexing system, PRECIS. Precis, a Rotated Subject Index System, by Derek Austin and Peter Butcher, is designed to add more and deeper subject indexing to that provided by Library of Congress subject headings because the BNB indexes to greater depth and does not want to lose this capability in the process of automating. The result is a special kind of permutation and is very impressive. An article describing the background for this work may be found in the ASLIB Proceedings for October 1970.

Finally, from England, there is the culmination of years of practice and operation of a faceted classification at the English Electric Company. Thesaurofacet; a Thesaurus & Faceted Classification for Engineering and Related Subjects, edited by Jean Aitchison and Patricia Day, is a most interesting hybrid. The "traditional" faceted classification has been abandoned for a combination with more search power. "The terms in the system appear twice, once in the thesaurus and once in the schedules, the link between the two locations for the term being the notation or class number. The information given about the term in the thesaurus is additional to that given in the classification schedules, and in the same way, the information about the term in the classification is additional to that in the thesaurus. The two parts of the system are complementary, and if used separately, incomplete." The system is not difficult to use if instructions are followed. A most attractive feature is the inclusion of a special category in the thesaurus (A) meaning "auxiliary or additional hierarchy" after broader terms BT or narrower terms NT. This catches terms in parts of the classification schedule other than the main scheme for a given subject, and, in fact, is a way of treating cross-classification. It should be noted that Library Association Research Pamphlet No. 1, PRECIS and the Thesaurofacet have the imprint 1969, but for all practical purposes, belong to 1970.

In this country, the second edition of the MARC II Manuals introduces a number of significant changes and improvements as a result of experience. Everything in the computer field is moving so fast that one may expect a new edition every year or so. The major changes are in the character set, bibliographic notes, some tags, some mnemonic codes, the LC control number, "other subject headings," and so on. Any-
one following the system would have to have the manual and also the
mimeographed changes which come around between editions. The
third volume, "Transcription Manual: MARC Typists," has been re-
vised completely for use with a Magnetic Tape Selectric Typewriter
(MTST) instead of a Dura Mach 10 Tape Writer. The hardware sec-
tion has also been updated. Most of the changes add explanatory mat-
ter or cover omitted problems. A few delete things found by experience
to be unneeded. Catalogers should keep an eye on this work because
this is the input which eventually will be the source of data for all of
us. Recently a friend mentioned that an identical item was cataloged
one way in MARC format and another in the letterpress Library of
Congress standard cataloging. Any catalogers who come across such a
situation would be well advised to make it known because it would be
rather unfortunate to have the old National Union Catalog type of
careless entry or cataloging widely disseminated through the MARC
tapes.

It is assumed that the readers of Library Resources & Technical
Services read each issue and note the articles significant for the areas
of their own special interests. For an assistant editor to single out and
evaluate the merits of one article over another seems unfair since all
are carefully considered before acceptance. Therefore, in this year's
discussion references will be limited to the most informative articles
in a selection of other journals which the reader may not have seen,
as well as books.

A thought-provoking article, "Opinion Paper: Towards a Meta-
sience of Information: Informatology," places cataloging and classifica-
tion in a general schema, which most catalogers probably would not
accept. Alternatives are needed.

Several articles on classification and/or indexing have appeared,
notably, Nancy Brodie, "Evaluation of a KWIC Index for Library Lit-
terature"; Douglas Foskett, "Classification and Indexing in the Social
Sciences"; Eric Coates, "Switching Languages for Indexing"; and
Theodore Hines, Jessica Harris, and Martin Colverd, "Experimentation
with Computer-Assisted Indexing." The Brodie article suggests
bringing out a KWIC index to Library Literature as "an experimental
basis for a fast announcement service." An adverse comment on this
article appears in a letter to the editor of the Journal of the American
Society for Information Science, but this is based on material not in
the open literature and one can scarcely fault any writer for not reading
what is unavailable. Foskett gives an interesting exposition of new
views on an old subject. Coates discusses an Intermediate Lexicon for
interconverting different subject indexes, the purpose of which is to
eliminate duplication of effort wherever possible. There is an interna-
tional cooperative effort underway for this purpose. Hines, Harris, and
Colverd make further advances in the process of semiautomatic in-
dexing with manual assignment of subject terms and using the Hines-
Harris computer filing code developed a few years ago.

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An article on the retrieval usefulness of material in a catalog entry other than author, title, and subject by William S. Cooper ranks other items in terms of apparent value. It seems rather unlikely that a user could manage to forget all three major points of entry, the remainder being called a "sand castle catalog" by John Howard of the University of Edinburgh Library.

A series of interesting studies has been made at the University of Michigan which probably will not be read by the ordinary garden variety of catalog librarian because of the fierce-looking mathematics contained in the various items. Perhaps this is the reason they have all been published in other journals even though they pertain to cataloging. However, they are well done and well written and it is perfectly possible to read "around" the mathematics and catch their message. One is on the "Effects of Cataloging Volume at the Library of Congress on the Total Cataloging Costs of American Research Libraries." The others are on "Orthographic Error Patterns of Author Names in Catalog Searches," and "Access and Recognition: From User's Data to Catalog Entries."

To some extent these articles discuss what every librarian knows, but the authors put this knowledge on a scientific basis rather than an intuitive one. Through Kochen and his associates we are acquiring a sound basis for theory-building in spite of ourselves.

Other articles with a mathematical basis to some extent are "How Many Cards Per File Guide? Optimizing the Two Level File" by Ben-Ami Lipetz and Czetong T. Song, and "Comparisons of LC Proof Slip and MARC Tape Arrival Dates at the University of Chicago," by Charles Payne and Robert McGee. The titles reflect the content.

The field of automation has produced material of interest to catalogers, in addition to the whole MARC Program. Frederick Kilgour writes of the latest vision of the Holy Grail in his, "Concept of an Online Computerized Library Catalog." Considering the excellent article in the November National Geographic and the articles in the February issue of DATAMATION, such dreams are not to be sneezed at. The project to run MARC "backwards" in time has been reported upon by Henriette Avram and the RECON Task Force (REtrospective CONversion). Allen Veaner has written a thoughtful and informative article on "The Application of Computers to Library Technical Processes," which should be read by all. Richard De Gennaro indicates what can be done with the shelflist in machine-readable form. Librarians who feel they cannot afford MARC-type automation should take a look at this.

Two articles concerned with teaching have appeared. The first, by Pauline Atherton and Karen Miller, covers experimentation with MARC I as a data base for various kinds of technical processing and searching. The data base was also used for research projects by staff and students. In a different vein, Anthony Foskett describes a two-course sequence for teaching classification and subject cataloging, the first covering the organization of knowledge (the universe of knowl-
edge) and the second covering the organization of knowledge in libraries. Considering the great variation in backgrounds of library school students and the introduction of information science (including a good deal of nonlibrary-oriented subject approach methods), this looks like a logical sequence.

Cooperative cataloging and shared cataloging also receive their share of attention. Joseph Nitecki describes an experiment involving university and special library cooperation, while Onsi and Pelosi tackle cooperation in several medical libraries. The medical situation in particular bears watching as much is being done here on a regional and national scale that could serve as an example to other types of libraries. Conformity to national standards does not seem to be very much greater than in ordinary libraries in spite of much increased financial allurements.

A preview of the sweeping changes to be made in the Colon Classification has been given by S. R. Ranganathan in “Colon Classification for Library Science.” All the main classes in the whole system have been restudied and a much larger number will be included. This is probably the first time an important classification system has ever made such wholesale changes in its MAIN classes.

A long review article by Jack Mills, “Progress in Documentation: Library Classification,” is wide ranging, informative, well written, and interesting. Incidentally, the British, in retaining the term “documentation,” have not become confused with computer and information science as has been the case in this country. The kind of information science a computer-type person talks about is very different from that of a librarian or documentalist . . . even the terms library and computational linguistics have different meanings. Fairthorne’s warning about “public words with private meanings” has turned into a quagmire of multiple public meanings.

1970 saw the publication of the first volume of Advances in Librarianship. Three review chapters are especially significant for catalog librarians: “The Machine and Cataloging” by George Piternick (p.1–35); “Mechanization and Library Filing Rules” by Kelley Cartwright (p.59–94); and “Standards for Technical Service Cost Studies” by Helen Welch Tuttle (p. 95–111). It should be remembered that annual reviews always cover the preceding year, and the longer the work, the longer it takes to get it through the press. Even this brief review, for example, will not include any 1970 publications that have not yet arrived, such as the November or December issues of journals from abroad, or books with 1970 imprint actually released in 1971.

Two more programmed texts have appeared. One is on the Universal Decimal Classification, by Hans Wellisch. This appears to be a serviceable book. It could be put into machine-readable form and used for dialogs with a computer by adding the actual UDC schedules already in machine-readable form as a result of the Freeman-Atherton project for the American Institute of Physics. The other text, by John
Boll, is the first of a set on cataloging. This looks as if it might help take some of the routine work out of teaching and allow more classroom time for thought instead of imparting basic essentials.

Last but not least, the revival of the ill-fated Cataloging-in-Source experiment in a more modern dress as Cataloging in Publication seems at last to be reaching the pot of gold at the end of the rainbow. One only wishes that Esther Piercy were here to see it. The papers of the 1970 Resources and Technical Services Division program meeting are available in the Winter 1971 LRTS and should be read both by those who participated in Cataloging-in-Source and by younger catalogers who want to know what it is all about.

On the cheerful note that there is nothing so powerful as an idea whose time has come, we close this essay. With MARC II perking along, with PRECIS soon at our fingertips, and with the hope of Cataloging in Publication, the future looks considerably brighter than it did a few years back.

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34. Hans Wellisch, The Universal Decimal Classification; A Programmed Instruction Course (College Park, Md.: School of Library and Information Sciences, University of Maryland, 1970).

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A REVIEW OF THE DEVELOPMENTS relating to library microforms becomes a more formidable task with each passing year. The trends reported in recent years remain much the same but the pace quickens and the volume of literature reporting these developments multiplies. The reproduction of library materials is big business as evidenced by the following patterns:

1. Microform research blossoms.
2. Micropublishing grows.
3. Legislation stalls (by virtue of its complexity).
4. Literature abounds.
5. Products, equipment, and services diversify (with emphasis on computer-output-microfilm).
6. Professional activities expand.

Microform Research

The biggest news during the year has been the results of research sponsored by the Office of Education (OE). Libraries are fortunate that the funding by OE for microform research has continued, for the prospect of its continuance in such sizeable amounts in future years is not encouraging. Last year’s article referred to five research projects in microform technology supported by OE. The status of these (all of which were funded by OE into 1970), as well as of three new projects, is as follows:


The ARL Microform Technology Project originated in the summer of 1968 when ARL was awarded an OE contract for a study to identify the chief problems inhibiting the full and effective use of microforms as instructional and research tools in libraries, especially college and
university libraries. Donald C. Holmes served as project director and principal investigator, and the findings of his interim report, published in the summer of 1969, were cited in last year's article.

The report submitted to OE this November presents the results of two distinct studies directed toward solution of two of the major problems identified by Holmes. Part one, by Holmes, for which OE authorized $77,658 for the period June 1969 through June 1970, deals with the environmental conditions required in a library for the effective utilization of microforms. It contains findings on the lighting, temperature, security, etc., of microform reading areas, design sketches for a microform study carrel, recommendations on the inspection, processing, storage, and handling of microforms in libraries, as well as the instruction necessary on the use of microforms and related equipment, and a list of desirable characteristics for readers and reader-printers.

The establishment of a permanent national microform agency was the number one recommendation by Holmes in his earlier report and is generally agreed to be the single most important step that could be taken to facilitate the more effective utilization of microforms. As a continuation of Part 1 of the ARL Microform Project, OE reportedly will fund the design of ways and means for establishing such a national organization. The principal investigator for this segment of the project will be Edward Miller, recently retired from the National Library of Medicine.

Part two of the report is by Felix Reichmann and Josephine Tharpe and concerns the bibliographic control of microform publications on local, national, and international levels. It reports preliminary findings and lists ten major recommendations. One recommendation that we can immediately assist in implementing is: "Papers published in the professional journals should urge library administrators to assign adequate manpower to the processing and servicing of microforms." You are so urged. These important recommendations should be read in full by all librarians with a responsibility for microforms, particularly the comments about the most serious problem of apathy. Hopefully, this study and the Denver Conference cited in the next section will assist in focusing the attention on this problem that it deserves.

The report on the bibliographic control of microforms is an interim report. OE authorized an additional $33,645 for this work for the period July 1, 1969, through June 30, 1971. Reichmann and Tharpe are to submit their final report in June 1971. The present report refers to an article published during the year which gives the results of a survey conducted on the use of the National Register of Microform Masters.

Denver Research Institute (DRI).—An Investigation of the Environment for Educational Microform Utilization.

The DRI project, originally funded for FY 1969 for $119,558, was continued into FY 1970 with a grant of $85,000 for a study of the characteristics of ultrafiche and its application to colleges and univer-

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sities. These funds were supplemented by $24,561 which authorized the Denver Conference on Microform Utilization in the Academic Library Environment, December 7-9. A brief report on the conference at Denver University will be published in January 1971 in the Library of Congress Information Bulletin while the full proceedings are to be published later next year. The funds for the basic project expired on December 31 and the final report has not yet been submitted to OE. Based on an interim report submitted in June, the research during the year was divided into three areas: (1) Classroom Study I—A Survey Course; (2) Classroom Study II—A Content Course; and (3) The Carrel Design Study.

In Classroom Study I, the study habits of students in the University of Denver Graduate School of Librarianship enrolled in a survey course in Information Science and Technology were investigated. A group of students utilizing conventional textual materials in normal fashion were compared with a group taking the same course in the spring term. The latter group had the option of obtaining hard copy materials that were available on reserve in the university library, or utilizing the ultrafiche (150X) form of these materials, which was supplied to each student at the first class meeting. Several of the students were provided with fiche readers to be used in the students' residences.

Classroom Study II investigated the routine use of ultrafiche in direct support of an undergraduate level course entitled, "Sensation and Perception," which was taught during the spring term. This course required that the student become very familiar with and retain the course content (as opposed to survey course requirements which necessitate only familiarity with the material). Again, the required readings were obtainable from the library, as well as being provided on fiche presented to each student.

In the Carrel Design Study selected students were given reading and note-taking tasks at each of two reader stations. The reader stations were built to accommodate two (18X) readers in different settings. Observations of the students interaction with each reader were documented by questionnaires, photographs, and interviews.

Some of the preliminary findings by James P. Kottenstette, the project director, were:

1. There is no basic or unanticipated problem associated with vertical formatting (on the fiche) of the material presented.
2. The vertical orientation of the reader screen was criticized severely.
3. Difficulty with note-taking and the desire to underline material were common complaints by the students.
4. Students, using the readers routinely, established surprisingly large distances between the reader screen and the eye position (24 to 36 inches).
5. The use patterns, machine versus hard copy, show that the student interest in the machine presentation lessened while the use

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of hard copy increased over the duration of the experiment. Approximately one-fourth of the students in both classroom experiments quit the machine presentation during the quarter.

American Association of Junior Colleges (AAJC).—Determination of Student Acceptability and Learning Effectiveness of Microform Collections in Community Junior Colleges.

The final report on Phase I of the AAJC Microform Project, based on an OE grant of $65,618 for the period March 15, 1969, through March 14, 1970, was submitted to OE in June. In this phase the project office was established, personnel were trained, the project was publicized, a survey of community colleges was made in order to determine which courses to include, subject specialists were selected to compile bibliographies for each course included, the bibliographies were received and processed, and plans were developed for the continuation of the project. The bulk of the report consists of bibliographies compiled for courses in Art Appreciation, Black Studies, Economics, English, Life Science, Mathematics, Nursing, Political Science, Psychology, and Spanish. With the identification of these basic collections, a research design was developed to measure the acceptability and effectiveness of microform collections of these commonly found courses and programs. Phase II of this project has been funded through May 31, 1971, in the amount of $108,047 for a series of pilot studies. Some materials are being filmed, film of other materials is being acquired, equipment is being assembled, and negotiations with five community colleges in the Washington, D.C., area are underway to secure their participation in the pilot studies. Dale Gaddy is now the project director. Phase III (1971-73) consists of a two-year field test, and Phase IV (1973-74) will include the analysis, reporting, and interpretation of the data collected in the study.

DASA Corporation.—Development of a Low-Cost Microform Reader.

The low cost, portable DASA microfiche reader, and several like it, are considered in the section on equipment. This $50,000 project terminated on April 30.

MIT-Project Intrex.—Microfilm Reader Experiments.

No published report is available yet on the progress of these experiments at MIT. Tests and improvements on the desk-top and a vertical-screen (wall-type) microform viewer are in progress. J. F. Reintjes of MIT is the principal investigator.

Modern Language Association of America (MLA).—Program to Demonstrate the Uses of an Inexpensive Microfiche Reader, and the Resources of ERIC and other Microform Information Collections.

The grant for the MLA project was $15,183 for the period January 1 through October 31. The purpose of the project was to encourage the use of microfiche for the dissemination of educational information by sending a team of selected young teachers and scholars to major university centers to demonstrate the use of the new inexpensive

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microfiche reader developed by the DASA Corporation with OE assistance. These representatives were to discuss the ERIC program with local education information personnel and discuss a proposed MLA abstract system for scholarly journal articles with scholars and teachers in the humanities. The team will prepare reports to be submitted to OE.

_Yerkes-Wolfe Associates, Inc._ — A Study to Evaluate and Improve the Total System Effectiveness of ERIC and Related Federal Micropublishing Programs.

The term of the Yerkes-Wolf grant was April 1, 1970, through January 1, 1971, and the funds authorized were $25,925. This study has as its prime objective the definition of problems which preclude total system effectiveness of the ERIC program at the user level. The second major objective is the conversion of these problems into definitive action plans for even more effective systems. Analytical interviews are to be conducted with the information agencies, recipients of the primary microfiche dissemination, individual users, and industry suppliers, culminating in a conference of interested parties. The final project report is to identify all problems, delineate those which can be solved through coordinated agency-industry liaison, and define areas where further research or development may be necessary.


The Office of Education also awarded a grant of $9,994 to ARL for the development of specifications for a national plan for the preservation of research library materials. The plan will include the administrative, operational, and bibliographic organization necessary to establish and effect a national preservation program. This new project, covering the period March 1, 1970, through January 31, 1971, is directed by Warren J. Haas, director of libraries at Columbia University and president of ARL. The principal investigator is Murray L. Howder, ARL staff member, who is being assisted by the ARL Preservation Committee. A report is to be published in mid-1971.

The papers presented at the 34th Annual Conference of the University of Chicago Graduate Library School in August 1969, together with articles that appeared in the January issue of _Library Quarterly_, have been combined into a valuable book on the subjects of the deterioration and preservation of library materials. A summary of practices and programs which can lead to an integrated and sensible preservation program on the national as well as the local level, and a discussion of preservation by microfilming, are included in this very worthwhile work.

**Micropublishing**

Allen B. Veaner, chairman of ALA's Micropublishing Subcommittee, has authored a detailed handbook designed for use by librarians...
in inspecting and evaluating micropublications. This excellent manual, being published by the ALA Library Technology Program for distribution early next year, should be purchased by all librarians with responsibility for acquiring micropublications.

Veaner also has contributed a valuable chapter on micropublication to the “Advances in Librarianship” series. Veaner states in his introduction that, “This review deals with micropublication in a broad context with particular emphasis on the problems of acquiring, controlling, and servicing microtexts in libraries. As a survey of the state-of-the-art, rather than a review of specific micropublishing projects, the history of micropublishing and the types of micropublication prevalent today are reviewed in relation to the library as the primary market and the agency which must provide the bibliographic control, indexing facilities, and equipment for the user.”

As an indication of the growth of and interest in this area, an estimated 500 librarians attended a two-day micropublishing seminar September 29–30 in Southern California, sponsored by Information Design, Inc., and numerous other micropublishers and equipment manufacturers. The seminar was designed to “provide more information about what’s new in microforms than librarians will find anywhere else.” This session followed the same format as the earlier seminar held in Northern California in July which was likewise well attended.

As evidence of the growth potential in micropublishing, A. N. Spence, Public Printer of the U.S., petitioned the Joint Congressional Committee on Printing for permission for the GPO to publish on microfilm, and has now announced that he will explore possibilities for converting GPO publications to microfilm or microfiche. A conference in Washington, D.C., is scheduled for mid-February 1971 to investigate this significant development with the major governmental agencies concerned.

The September 25 issue of Micrographics News and Views contains a fascinating account of the origins of ultramicrofiche (UMF), together with an evaluation of what has been accomplished to date from a technological point of view. This authoritative report is required reading for all subscribers and potential subscribers to the Encyclopaedia Britannica (EB) or the National Cash Register Photographic Microimage (NCR-PCMI) “libraries.”

A progress report on the status of the EB-UMF Project appeared in the November 9 issue of Publisher’s Weekly based on an October 21 press conference. The most significant features are that the investment is now said to be $6 million; the subscription price for the first series, “The Library of American Civilization,” has been increased to $19,500 ($21,000 after the initial delivery date); the delivery date has been advanced to May 1971; filming is in progress at Hanover (Dartmouth College Library), Champaign-Urbana (University of Chicago and University of Illinois), and Washington, D.C. (LC); and a mobile van is being utilized to film volumes in numerous other libraries.
throughout the country. In most cases there is only one title per fiche and pages are being filmed separately (single-page exposures). Also reported are the facts that the desk-reader being manufactured by the Du Kane Corporation of St. Charles, Illinois, has an $8\frac{1}{2}'' \times 12''$ screen and will sell for less than $400, while the small (four-and-a-half-pound) portable lap reader being manufactured by the Technicolor Corporation of Los Angeles has a $7'' \times 10''$ screen and will sell for approximately $150. A reader-printer is being developed for availability in late 1971 or early 1972. Library Resources, Inc. (LRI), the EB subsidiary in charge of this project, announced that more than 100 colleges and universities have stated their intention to purchase.

Britannica’s Microbook is the subject of the lead article in the October 5 issue of Micrographic Weekly. This article reports that two additional Microbook Libraries are in preparation by EB, Medieval Civilization and English Literature, and that LRI plans to schedule delivery of at least one to two libraries per year in the future. The November 30 issue of MW refers to the competition between the EB and NCR-PCMI systems.

A ten-page paper on the EB Library Series that appeared in February provides a discussion of the overriding principles of the system design plan, the resultant specifications, and the establishment of the editorial content of the program, as well as its relation to the overall system design. It is revealing and reassuring to note that Bill Hawken is one of the authors. Hawken is well acquainted with the reproduction of library materials, having served as the head of the Photographic Service at the University of California Library (Berkeley) and authored Copying Methods Manual for ALA’s Library Technology Program. The depth of understanding of the problems inherent in microfilming and servicing library materials is revealed in the following passage: “At first glance, the prospect of one or more new microforms which cannot be read on existing reading equipment and hence will require a new hardware line may cause many a librarian to reach for the aspirin bottle. Having suffered through equipment, file management, quality, bibliographic control and other problems such as varying reduction ratios and image sizes, negatives vs. positives, handling hazards, et cetera, with 35mm roll film, 16mm roll film, three sizes and two types of micro-opaques, and several sizes and types of microfiche from foreign and domestic sources, librarians have ample reason to look askance at the prospect of this painful history repeating itself still another time.”

The EB concept differs from all previous micropublishing ventures in a number of important aspects:
1. Content selection by scholars;
2. Completeness—catalog in book, card, and microfiche form, topical index, and biblioguide;
3. User ease, convenience, efficiency, and comfort given first consideration in the total systems design;
4. Special cameras and lenses modified and reduction of 55X to 90X chosen to insure quality;
5. Special bookholders, optical reduction printers, and reading equipment designed and constructed;
6. Desk model reader designed for library use (90X) and lap reader designed for home use (75X);
7. Bibliographic unity preserved by 75mm x 125mm fiche with eye-legible information in single line and each fiche in envelope with a printed reproduction of the entire LC (or equivalent) catalog card.

The Educational Products Department of NCR is advertising: “Dear Librarian——We are delivering now!” These full-page ads refer to the PCMI Library Collections of 4” x 6” ultrafiche transparencies of “thousands of valuable original texts and scholarly treatises in every major academic discipline——at $1.50 per volume. NCR is delivering the first shipments of the PCMI Library Collections, ultrafiches, and readers to participating libraries. We are delivering on the promise we made a year ago.” The PCMI Reader-Printer is also offered as “coin operated for library use.” Each 4” x 6” transparency contains up to 3,200 pages, or 7 to 10 volumes—a self-contained unit of topically related information arranged by Library of Congress subject headings. Full LC card sets on original stock are supplied for each title at no extra cost. NCR has published a listing of specific titles included in its first series. Initial PCMI Collections comprise five principal areas: American civilization; literature-humanities; social sciences; science and technology; government documents. New collection areas are being planned. One hundred ultrafiches, the equivalent of 700 volumes, are issued annually in each of these collection areas. An evaluation of the PCMI Library Collections authored by Walter D. Curley has been published by the Arthur D. Little Company.15

An article in the November 9 issue of the New York Times describes the delivery of the first installments of NCR’s PCMI series on American civilization to Hunter College in New York City.16 One limited assessment of the impact of UMF on libraries has been published.17 This observer indicates that: “The UMF libraries will make the presently substandard junior college and liberal arts college libraries richer in certain subjects than neighboring university libraries unless they, too, purchase the package. Do the advantages of wide distribution of source material outweigh the potential dangers of censorship by pre-selection and spoon-fed term papers by in-depth indexing? Will UMF libraries accelerate the present trend toward independent study? Will this technological phenomenon end the need for more librarians and turn those surviving into super clerks supervising the slipping of UMF cards into envelopes and pneumatic tubes?”

The EB and the NCR projects will meet head-on in the market place next year. At this point, these competing UMF systems can be
compared only to a limited degree from a technological and a bibliographical control point of view, since neither the EB fiche nor the EB readers have been delivered yet. Perhaps more importantly, a careful subject or title analysis needs to be made to really evaluate the coverage of the somewhat parallel "libraries." It is still premature to attempt to fully evaluate these projects. As the Microfilm Newsletter observed, since the two readers to be provided in conjunction with EB's UMF Microbook Series will not be available until mid-1971, "the jury will have to be out on Microbook at least that long."\(^{18}\)

In October the British National Bibliography published "Books in English," a bibliography compiled from UK/US MARC sources, on NCR's PCMI Ultrafiche. The first three fiche distributed cover the period January–July 1970 and are described as "a landmark in the development of bibliographic services designed to meet the requirements of libraries and information systems of the seventies."\(^{19}\) It is a product of three new technologies. First, the bibliographic data base technology which is the background to the massive Anglo-American MARC project. Second, the computer-output-microfilm (COM) technology which is a new base of modern microfilm systems. Third, the PCMI technology, which on current standards offers a reduction ratio of 150 to 1—"This initial publication is described as a "major bibliographic experiment. A small but heterogeneous group of British libraries have been invited to take part in the experiment by evaluating, not the finished product, but the first trial transparency that has been prepared." "Books in English" lists all adult books in the English language-which are recorded by the BNB and LC on the UK and US MARC tapes.

It is expected that ultrafiche of "Books in English" to be distributed in a year's time will include more than 70,000 items with a total of some 300,000 entries. "Books in English" has been planned as a throwaway bibliography. The main listing is in classified order arranged by the latest edition of the Dewey Decimal Classification. During the field trials an updated and revised publication will be produced every two months. It is planned that an "annual volume" will be published at the end of each year. A frame index is provided at the beginning of each fiche. This index is machine-generated as frames are produced and locates the position of material by reference to the transparency number, the row number, and the column number. Detailed comments and reaction by potential users have been requested so that "firm decisions can be announced (early in 1971) on the general form of the continuation service and its cost to subscribers."

The Saturday Review contained an interesting exchange on the history, development, and cost of microforms.\(^{20}\) This resume concludes that, at the current prices of microforms, books are not yet obsolete. The 1970 edition of NCR-Microcard Editions Guide to Microforms in Print contains over 18,000 titles, some of which are for entire collections. More reprinting firms are offering publications in micro-
AMS Press, Inc. offers various serials and documentary collections on 35mm microfilm.

Arcata Microfilm Corporation is offering a “News Bank Urban Affairs Library” on 4” × 6” microfiche. This service offers selected articles in twelve major urban affairs categories that have appeared in newspapers published in 103 cities in forty-five states. Selections are made by the Urban Research Corporation from over 150 newspapers, and it is estimated that more than 70,000 news reports will be supplied annually on approximately 1,700 fiche. Printed indexes will accompany each monthly update and a cumulative index will be published annually. Annual subscriptions, beginning in 1971, are $885 and include an Arcata Microfiche Reader.

The Microform Division of Greenwood Publishing Corporation offers microform collections, largely on microfiche, of Sources for the History of Social Welfare in America, State Labor Reports, State Constitutional Conventions, Catalog of Copyright Entries, and Congressional Hearings. Samples of Greenwood microfilm or microfiche may be obtained for inspection by any institution without obligation.

Greenwood has contracted for the filming of approximately 1,045 volumes (1,250,000 pages) in the Senate Library of the public hearings held in the House, the Senate, and the joint committees from the 41st to the 73rd Congresses (1869–1934). Included as part of the collection in both reprint and microform will be the “Index of Congressional Committee Hearings Prior to January 3, 1935 in the United States Senate Library” originally published by the Government Printing Office in 1935. The film of these Congressional Hearings is scheduled to be made available on 4” × 6” microfiche, with delivery in three installments by May 30, 1971. If ordered directly from the publisher prior to January 30, 1971, the price is $13,000.

Greenwood also offers serial titles that have previously been reprinted by other Greenwood companies. Initial offerings are Radical Periodicals in the United States, 1890–1960: Series I; Radical Periodicals of Great Britain, Period I (1794–1867); and Reprints of Negro Periodicals: Series I. The titles are available on either 4” × 6” microfiche or 35mm negative roll microfilm.

The volumes from Sabin’s Dictionary of Books Relating to America, from its Discovery to the Present Time which have been offered in microcard format by Lost Cause Press are now offered on microfiche as well. The series price increased from $10,590 to $15,885 in February.

“Microform is the library’s White Rabbit, just as in Alice’s Adventures in Wonderland the White Rabbit gave Alice a magic fan that brought her down to size. The library doesn’t have a White Rabbit, but by utilizing microforms it can cut its growth problems down to size too.” This is the theme of a little pamphlet distributed by the Micro Photo Division of the Bell & Howell Company.21

Micro-Publishing Systems, Inc. of Stamford, Connecticut, is the suc-
cessor to Thomas Publishing Company's Micro-Catalog which makes available more than 6,000 manufacturer's product catalogs on 4" x 6" microfiche.

The *New York Times* has signed a ten-year agreement with Columbia University providing for the micropublication by the Microfilming Corporation of America (MCA), of much of the oral history collection of the Butler Library. Typescripts of oral history interviews comprising more than 325,000 papers will be reproduced on roll microfilm and microfiche by MCA which will distribute prints and will periodically publish a reference index.

The quality control measures employed by MCA are described in the November issue of *Information and Records Management (I&RM)*. More than 50 million feet of the *New York Times* were produced last year at the MCA laboratories in Glen Rock, New Jersey.

Mikro Buk, Inc. of New York City offers a twelve-page list of books available on ninety-eight-page format microfiche at low prices. A Viewonics projection-type microfiche reader is offered for $75.

Princeton Microfilm Corporation (PMC) issued a Summer 1970 catalog entitled International Research Journals on 35mm microfilm. PMC advertises that it "is unique in providing customers' prints directly from original masters—not from intermediate work prints one or two generations removed from the original." PMC's catalog no. 37 lists primary and secondary research journals on 16mm microfilm. The titles listed are available in both cartridges (3M, B & H, or EK) and open reel forms, positive or negative. The abstracts published by Engineering Index, Inc., are now filmed by PMC and are available on 16mm and 35mm positive and negative microfilm. For details contact Marketing and Business Services Division, Engineering Index, Inc., 345 East 47th Street, New York, New York 10017. The Proceedings of the U.S. Congress for the years 1789 through 1964 are offered on 479 reels of 35mm microfilm by The United States Historical Documents Institute, Inc., Washington, D.C. In addition, 101 companion index volumes to *Annuals of Congress, Register of Debates, Congressional Globe*, and *Congressional Record* are available in book form. This firm is a joint venture of the owners of Carrollton Press and PMC.

Research Publications, Inc. (RPI) has begun microfilming League of Nations published and unpublished documents and publications on 35mm microfilm. This project has been undertaken with the cooperation of the League of Nations Library in Geneva and the U.N. Library in New York City.

RPI also announced a micropublishing project for "Learned Periodicals of the 17th and 18th Centuries." The first segment of this 35mm roll microfilm program is entitled "Scientific, Medical, and Related Periodicals of the 17th Century." Other projects announced by RPI, all based on published bibliographies, are *Early American Medical Imprints, County Histories of Wisconsin, American Natural History, Early American Architectural Books, and Reports of Explora-

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Specialized Business Services, Inc. (SBS) of Rochester, New York, has announced the availability of a complete microfilm file of all federal government nondefense programs to aid potential beneficiaries in identifying a mass of data such as financial aid programs, current legislative documents, funding information, grants, loans and advances, facts of loan guarantees, etc. This service is termed Government Information Systems Technology (GIST) and offers 16mm cartridge microfilm updated weekly, a computer-generated index, a reader-printer with power scan capability to the odometer location cited in the index, a “Libraphone” offering direct voice communication with the SBS Central Information Library in Rochester through an automatic dialing service on the reader-printer, and a computer-assisted problem search (CAPS) through the use of the “Libraphone.”

University Microfilms now advertises that since 1938 they have amassed a master negative microfilm collection of 600,000 books, periodicals, and documents.

An imaginative proposal for a high reduction microaperture “bookform” publishing technique has been advanced. The author admits that the technique is only theoretically possible and that the equipment, and particularly the optics required, are not presently available. Possibly the suggestion will stimulate further experimentation in the area of aperture card micropublishing of library materials.

Kodak launched its Micropublishing Newsletter in April dedicated to helping any organization involved in the publishing of information apply modern microfilm techniques.

The cumulative index volume to South Asian Library and Research Notes lists microfilm holdings reported in the South Asia Microform Newsletter, which was published by the Association for Asian Studies (AAS) South Asia Microform Committee, 1962–1966. Inquiries about the availability of this volume, which will be of particular reference value for libraries concerned with the study of modern Indian history, should be directed to the Educational Resources Center, D-53 Defence Colony, New Delhi 3, India. The present AAS Committee on South Asian Library and Microform Resources serves as the Executive Committee of the South Asian Microform Project (SAMP), a cooperative undertaking of some twenty research libraries. SAMP is administered by the Center for Research Libraries (CRL) in Chicago.

The Cooperative African Microform Project (CAMP), sponsored by the Archives-Libraries Committee of the African Studies Association, is described in a new prospectus available from CRL.

Copies of Report VI of the Monastic Microfilm Project are available from Julian G. Plante, Curator, Monastic Microfilm Library, St. John’s University, Collegeville, Minnesota 56321. The goal of this five-year-old project is to secure the preservation of all handwritten manuscripts and documents dating before the year 1600 still extant in European monastic libraries.
The ARL Center for Chinese Research Materials Newsletter continues to list newspapers, periodicals, and research aids available from the center on roll microfilm, unbound Xerox prints, or offset copy.

Charles Yerkes has listed ten parameters for consideration before attempting a micropublishing venture: the makeup of the data base, distribution requirements, use requirements, economics, user acceptance, standards for microforms and hardware, available hardware and other products, marketing, copyright problems, and profit objectives.

The current status of the application of microform technology to commercial publishing is reviewed in an interesting article in *Book Production Industry*. Two articles in *Business Automation* give the results of surveys of the present and future use of microforms in the business world.

**Copyright and Other Legislation**

The copyright revision bill, S. 543, which the Senate subcommittee approved on December 10, 1969, made no further progress in the Senate during 1970. It has been held up principally by the issue of cable television retransmissions of broadcast programs. At the end of June, the Federal Communications Commission released a proposed set of new rules on this issue for comment by interested persons, and the Commission is expected to act early next year to adopt new rules on which the cable television provisions in the copyright revision bill might be based.

The status of the case of Williams and Wilkins (W & W) v. the National Institute of Health (NIH) and the National Library of Medicine (NLM) is reported in the ASIS Newsletter as well as in *Micrographic Weekly*. W & W has told *American Libraries* "that it is not the purpose of this suit to stop the photocopying of research material in libraries. Instead, it is hoped that the suit will produce a formal agreement between the publisher and NLM that can serve as a model for an equitable agreement between libraries who copy material and the copyright owners of the material copied."

At an Information Industry Association (IIA) Program in San Francisco on October 2, 1969, Lyle Lodwick, director of sales development for W & W, expressed the view that microforms and the reader-printer will increasingly preempt the researcher's and the library's need for full-size, ink-print editions of scientific journals. Lodwick proposed a nonexclusive microform licensing plan whereby the price of the microform would have built into it a royalty rate based on the current subscription price of the original journal.

On July 20, the President signed into law (P.L. 91-345) S. 1519, an act establishing a National Commission on Libraries and Information Science. Under this law the Commission is established as an independent agency within the executive branch. The law specifies that the

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Librarian of Congress is automatically a member, but none of the other members have been appointed.

Literature about Microforms

Wilbur C. Myers, former director of research of NCR's Electronics Division, is now the editor and publisher of a new biweekly newsletter entitled Micrographics News and Views (MN&V). This service, introduced in July, is designed to report on new trends and developments, products and services, systems and applications, companies, people and associations, publications, conventions and trade shows in the field of micrographics. The editorial advisory board includes Allen B. Veaner for library applications and micropublishing and Joseph Becker for information science and systems. The price of a subscription is $95 per year.

Almost simultaneous in its appearance was Micrographics Weekly (MW), also published in California. This is a comprehensive management report on microfilm, micropublishing, and the computer-microfilm interface; it reflects keen awareness of the impact of microform developments on libraries and educational institutions. The annual subscription cost is $75. MN&V and MW, coupled with the monthly Microfilm Newsletter and the monthly Information and Records Management magazine, provide complete coverage of industry news. To maintain current awareness, one should also read the National Microfilm Association (NMA) literature, Library Technology Program (LTP) Reports, as well as the various library and publishing journals.

Arthur Teplitz of System Development Corporation contributed to the 1970 edition of the Annual Review of Information Science and Technology on the subject "Microform Technology and Reprography." Teplitz admirably proves his own point that "Surveys and review literature also show increased sophistication and maturity with resultant improved usability." The chapter is divided into sections on computers and microfilm, publishing, user studies and reviews, reprography, and new products. The effect of COM, CIL (Computer Input Microfilm), and computer-controlled retrieval systems are emphasized. Most refreshingly, Teplitz evidences empathy for the effect of microforms on libraries. This review is highly informative and includes a comprehensive bibliography. A critique of this chapter by David R. Wolf appeared in the November issue of Micro-News Bulletin. The December issue of I&RM contains a concise and valuable review of developments in the microfilm industry during the past year prepared by the publisher of the Microfilm Newsletter.

Arthur Teplitz also contributed an excellent article with the theme that the use of microfiche is limited because user requirements and standards are poorly defined. Among predictions that Teplitz makes are the following: "Within 10 to 15 years, a significant part of the school books, training aids, reference material, etc. will be in microform. College students will be required to have microfiche readers.
Thomas G. Lee, who authored the report of an OE-funded project cited in last year's article, has contributed a useful and attractively illustrated booklet this year also. "Microform Systems; A Handbook for Educators" is designed to provide basic information and assistance to education institutions in planning effective applications of microform systems. It is geared to the secondary school and junior college level. The author is district media coordinator of the Mona Shores Schools in Muskegon, Michigan. Copies are available for two dollars from the Michigan Audio-Visual Association, 401 South Fourth Street, Ann Arbor, Michigan 48103.

Libraries with moderate-sized newspaper clipping collections will be interested in an account of the utilization of the Recordak Microcode system for storing newspaper clippings and index codes that described these clippings, on 16mm microfilm, with the capability of searching the file rapidly and automatically. This system was applied to 1,000 clippings on file in the Medill School of Journalism at Northwestern University.

The development of a "Selectraframe" microfilm printer at the National Library of Medicine, that was mentioned in the review article for 1968, has been documented in a pamphlet available from the Superintendent of Documents, Government Printing Office for 25 cents.

Jacque A. Locke contributes a very practical Microfilm Primer column to the monthly Reproduction Methods. Among other things he describes the increasingly apparent phenomenon of the production of hard copy from microfilm in prodigious quantities. He comments that in systems designed to replace hard copy, it is strange that, in spite of high cost, the production of hard copy from microfilm has now apparently achieved a position of grudging legitimacy.

The Institute for Graphic Communication, Inc. publishes a monthly service entitled Graphic Communications which regularly reports on new developments in the fields of publishing, photography, facsimile, graphic arts, computer printout, graphic storage and retrieval, microform systems, and reprography. The annual subscription fee is $150. Peter Scott, head of the Photographic Service at MIT, is the contributing editor for microform systems.

News from the Center, Spring 1970, issued by the Library of Congress Manuscript Division, Center for the Coordination of Foreign Manuscript Copying, deals with Latin America. The center has now been closed, but answers to questions in this area, or copies of this or previous issues of the News, can be obtained from the Manuscript Division, Library of Congress.

Don W. Massey, director of Photographic Services at the University of Virginia Library, has described the management and organization of the photoduplication facilities at the Alderman Library.

A new edition of the Specifications for Library of Congress Micro-
filming is being prepared by the Photoduplication Service of the Library of Congress. It will be produced in parts, with each covering a different type of material to be prepared for microfilming for libraries. The first part of this series, which will cover the microfilming of newspapers, will be available in 1971.

A new segment of the National Register of Microform Masters appeared in December containing a cumulation of more than 14,000 serial titles for which the existence of master negative microfilm masters have been reported. This 1969 annual issue of the Register contains only serials listed alphabetically by main entry; it does not supersede the 1966–1968 issues, which are to be used to locate entries for monographs. It does supersede and cumulate the entries for serials included in all previous issues.

The seventh edition of Newspapers on Microfilm is in preparation by the Catalog Publication Division of the Library of Congress and will be available late in 1971.

The 1970 supplement to NMA’s Guide to Microreproduction Equipment is now available; it lists over 137 new items in 250 pages.

Highly recommended is the report of the activities and findings of a six-month study conducted for the Defense Documentation Center (DDC) by System Development Corporation. The objective of this study was to determine user requirements and to develop design objectives and specifications for a low-cost microfiche storage and retrieval system. It contains data, analysis, and conclusions pertaining to small user storage and retrieval requirements, the small user market, microfiche storage state-of-the-art, current research in microfiche storage and retrieval, and design objectives and specifications for two optimum storage and retrieval devices. The chapters examining the present and projected state-of-the-art of microfiche storage and retrieval equipment, and identifying and describing current research in the area of microform storage and retrieval technology that might negate present development efforts, are particularly interesting, as well as encouraging.

A report considering the use of 105mm × 148mm microfiche for report material of NATO nations appeared; it discusses microfiche readers and reader printers and outlines proposed standards for microfiche.

For crystal ball gazers, a group of approximately fifty distinguished representatives from government, industry, and academia participated in a study for the Naval Supply Systems Command that resulted in a fifteen-year forecast of information processing technology. The major gaps detected by the study were lack of uniformity in systems and procedures, and lack of uniformity in equipment. Long lists of possible events are evaluated on the basis of user desirability, production feasibility, and probable timing. Microforms and Related Equipment, and Facsimile and Reproduction Equipment are two of the fourteen categories of information processing investigated. The last

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issue published of *Navy Management Review* was devoted entirely to the new role for microforms and contains five good articles.47

The Proceedings of the Conference on Image Storage and Transmission Systems for Libraries, held at the National Bureau of Standards in December 1969, were published in hard copy in September and distributed on microfiche in December.48 The papers cover techniques for image storage and transmission, including automated storage and retrieval of microforms and ultra-microforms and new developments in graphic and facsimile transmission.

"Microimages, in spite of all the existing problems, are having a revolutionary impact on library operations," according to John G. Veenstra in an interesting article in *Library Journal*.49 Exceptions in the form of three postscripts to the article were contributed by Paul Zurkowski, executive director of the Information Industry Association.

The 1969 U.S. Library Microfilm Rate Indexes, published during the year, reflect an increase of only 3.7 percent in the index value of the average rate for negative microfilm, and an amazingly low 1 percent increase for positive microfilm when compared with the 1966 indexes.60 These increases are markedly less than those for books and serials during the comparable period. Based on the history of the indexes since 1959, we are now in a period when U.S. institutional microfilm rates are due to increase an average of 10 percent.

An economical method of producing sets of catalog cards by photographing copy from the National Union Catalog and subsequently Xeroxing it, that was developed at the Arizona State University Library, was also described in an article in *LRTS*.61

A new system of grouping reports announced in *Clearinghouse Announcements in Science and Technology* was made effective with the July 10, 1970, issues. The former forty-six subject categories were regrouped into thirty-five individual fields.

As a result of an administrative reorganization in the Department of Commerce, effective September 2, 1970, the former Federal Clearinghouse for Federal Scientific and Technical Information became the National Technical Information Service (NTIS) of the Department of Commerce.

In a move to combat rising expenses and more realistically recover production costs, effective January 1, 1971, the standard price for documents available from NTIS in microfiche form on a demand basis will increase from sixty-five cents to ninety-five cents per document. Documents available on standing order through the NTIS Selective Dissemination of Microfiche (SDM) service will cost thirty-five cents per document rather than the former price of twenty-eight cents each. Also, two years after the original announcement date of availability, documents in hard copy having 300 pages or less will have a service charge of three dollars added to the announcement price.

A report of a study of users' reaction to microfiche in a special library records negative and apathetic attitudes as a result of the user
Every use to which microforms can be put will almost certainly be found to exist in the federal government, as attested by an inventory of more than 700 microform applications in the U.S. Government compiled by the National Archives and Records Service. This document lists agencies and their locations, and describes the kinds of records involved, the microform employed, and the type of application. Through the use of this inventory potential users of microforms can learn where to write for information from an office that is already using microforms.

The ERIC Clearinghouse on Library and Information Service, now operated by ASIS, plans to commission a series of state-of-the-art papers on microform technology in library and information centers. The first report under consideration is a general literature survey covering the economics of microforms, emerging standards, and general applications. Subsequent reports planned are on the use of microfiche, roll film, aperture cards, and COM.

A brief article on the acquisition of microforms from a librarian’s point of view appeared in January. Because of rapid developments in the micropublishing of library materials, some of the information is already superseded. However, it is a good general introduction for an acquisitions librarian.

The ARL academic library statistics for 1969/70 show a total of 34,410,400 microform units in the collections of the seventy-six member libraries reporting, with a median of 412,869 units. Statistics for the “types of microforms in library” category are subdivided into (1) reels of microfilm, (2) number of microcards, (3) number of microprint sheets, and (4) number of microfiche for each library; Syracuse University Library reports the largest microform holdings (1,187,763 units) with totals of (1) 22,449, (2) 203,276, (3) 690,678, and (4) 271,360, respectively, in these four categories.

Auerbach Information, Inc., of Philadelphia publishes loose-leaf reference works for current awareness in the field of information processing, data communications, and graphics. The Auerbach Graphic Processing Reports is a comprehensive analytical service on microfilm information storage and retrieval systems, microform reader-printers, computer output microfilmers, etc. These two volumes are updated quarterly; the annual subscription cost is $385 for the initial year and $340 per year for renewals thereafter.

A report written for the University of Pittsburgh Libraries proved to be sufficiently valuable to merit publication in the series of University of Pittsburgh Studies in Library and Information Sciences. When published in January 1971 it will be available from the University of Pittsburgh Book Store. This report contains a survey of microforms on the University of Pittsburgh campus and an evaluation of the need, problems, economics, and various forms.

Volume II of a state-of-the-art literature survey entitled, “The Ap-
plications and Technology of Holography," has been compiled and covers the information published between January 1969 and January 1970. The report contains 571 entries, over 500 of which include summary abstracts of the original articles. Volumes I and II of this survey are available for $175 from Industrial Information Services, 120 Science Information Center, Southern Methodist University, Dallas, Texas 75222.

The birth of holography (lensless photography) is dealt with in a very interesting, colorful, and highly readable fashion in two articles in an important new monthly journal, *Innovation*. The journal, which is devoted to the art of managing advanced technology, is accurately described as "quite unlike any professional publication you have ever seen, in its readability and in its physical attractiveness." The articles tell how Dennis Gabor invented holography in the late 1940s and some of the ways existing companies have reacted to the emergence of this new technology. One conclusion reached is that commercial holography is now where photography was in the mid-nineteenth century.

Readers may obtain a complimentary copy of the "1970 Index to Kodak Technical Information" (Kodak Pamphlet No. L-5) by writing Eastman Kodak Company, Department 412-L, Rochester, New York 14650.

The *NRCd Bulletin*, published quarterly by the National Reprographic Centre for documentation in England, is a valuable source of information. Each issue contains abstracts of relevant literature.

A brief account of the recording of 1,700 insurance maps on color microfilm at the library of the University of California at Santa Cruz has been published.

A summary of the precautionary measures recommended to prevent the formation of blemishes on processed microfilm, issued by the National Bureau of Standards in March, cites the following:

1. "Use safety base permanent record film as specified in the ANSI specifications for photographic films for permanent records.
2. "Use no higher densities than are required for the intended purposes and use dark characters on a light background if this is feasible.
3. "Residual thiosulfate concentration should not exceed 1 microgram per square centimeter, but should be greater than zero. The optimum concentration appears to be about 0.5 microgram per square centimeter in a clear area.
6. "Store films in containers made of inert materials, such as metals or plastics of proven quality. With good ventilation and clean air, the containers need not be sealed.
7. "Do not permit storage temperature to exceed 70°F nor the relative humidity to exceed 40 percent.
8. "Avoid wide-range cycling of temperature and humidity since this accelerates the imbibition of gaseous contaminants."


Products, Equipment, and Services

The COM surge in popularity has stimulated the competition in the thermal film field formerly dominated by the Kalvar Corporation. Now Xidex, Memorex, and Horizons Research, Inc. are also offering dry, nonsilver photographic film to capture some of the recording and duplicating market. Kalvar Corporation has filed suit alleging infringement by Xidex Corporation of one of its patents pertaining to the manufacture of vesicular film. A detailed report of the results of studies to determine the stability of vesicular microfilm concludes that "the examination of samples of Kalvar Type 10 film aged 10 years under New Orleans conditions shows excellent image stability and does not reveal any destruction or change in the developed image. The environmental and stress studies revealed that vesicular images resist high temperatures, but some combinations of high temperature and high humidity cause image loss."59

A new type of paper, with a coating that prevents anything printed on it from being photocopied, has been developed by Litton Industries. No details are available yet on the cost but reportedly Litton hopes to sell it to periodical and other publishers.

Several significant new electrographic processes and products developed in the last few years in response to imaging requirements in the computer, facsimile, and microfilm fields are described in an illustrated and well-documented article in Tappi.60

For the past several years Itek Corporation has been engaged in research and development on a new proprietary photographic system called the Itek RS process. This is a family of new photosensitive materials which can be applied to practically any surface, in the daylight, to produce high quality photographic images.

Not only is there computer-output-microfilm (COM) but also computer-input-microfilm (CIM), computer controlled retrieval (CCR), Small Office Microfilm (SOM), and Printer Output Microfilm (POM). At a session on computer-microfilm interface at a seminar in Boston sponsored by the Society of Photographic Scientists and Engineers, the Society for Information Display, and the National Microfilm Association, Dr. Dwight Burnham of Eastman Kodak Company cited microfilm as a significant vehicle for producing high-capacity computer memories.61 There are now three methods available for utilizing microfilm as computer memory: spot, diffraction grating, and holographic recording. The AEC has spent $2 million for a photodigital storage system constructed by IBM at the Lawrence Radiation Laboratory, University of California (Berkeley). This spot recording system
involves recording binary digits as clear and opaque areas on conventional photographic films with dark areas on the film exposed either by light or by electrons.

As an Oppenheimer and Company report on COM observed, installation of a COM device generally results in a tenfold increase in the speed of computer output and "our field work has consistently shown that an early xerox type phenomenon exists—user volume rises rapidly to meet capacity." However, the report cautions that: "A computer microfilm information system cannot be used in situations where the data base changes rapidly. It also cannot be employed where user interaction with the data base is desired."

A special report on COM appeared in the May issue of Data Management citing some of the history of its development, characteristics of the users, costs, and considerations that should be taken into account by the prospective user. A similar article appeared in Business Week.

Dataflow Systems, Inc. of Bethesda, Maryland, has issued a comprehensive report on COM that includes a section on microform storage and an up-to-date bibliography. The cost of this paper bound report is $12.95.

A special new products report on COM machines, microform duplicators and readers, film, and COM service bureaus appeared in Data Product News. It refers to Printer Output Microfilm (POM), the transfer of line printer output from continuous fan-fold forms onto microfilm.

DDC published a valuable report on its experiences with COM. The National Microfilm Association has published a well-illustrated and practical guide to COM. The December 1969 issue of Datamation contains a series of articles on COM including its history and likely future, capabilities, a chart listing manufacturers, models, characteristics, costs, etc., and descriptions of some actual applications. Also, Information and Records Management magazine now issues a bimonthly COM supplement which features new products, companies, services, and case studies.

To keep COM in perspective, one author observes that "computer hardware design is progressing at such a rate that it is difficult to understand where it is now, much less where it is going. On the other hand, computer software still exists only as a pre-science technology, and therefore it is very difficult to make any generalizations about its status, other than to say that it is a sufficiently primitive art to require the name "Computer Sciences" in most centers of research."

It is estimated that there are now approximately forty manufacturers of COM hardware and twice that many COM support hardware manufacturers. To assist in the task of selecting and evaluating a COM system a recent article offers twenty questions that most frequently are asked by COM users, all of which should be answered in the affirmative before acquiring COM equipment.
The University of Wisconsin, Milwaukee campus, utilizes a Chicago-based COM service bureau to produce 4" × 6" microfiche of their "Administrative Study List" file. This listing of students in various sequences and formats is updated biweekly and supplied to twenty-two campus locations. The COM device employs a Universal camera with 105mm film which is cut into 6" strips. The film is "stripped up" into 4" × 6" fiche format, with each fiche containing 208 frames of data at a 42X reduction. The fiche are indexed and titled by the computer. The entire file of records of 19,000 students is contained on thirty-two fiche which are read on Micro Design COM Readers with a 42X magnification.

Reportedly, other institutions using COM-generated microfiche for student records control are Temple University, the University of California at Santa Cruz, the University of Missouri, and the University of Washington. The adult and juvenile sections of the Los Angeles County Public Library Catalog are to be recorded on a COM and then transferred directly to offset printing plates.

The Microfilm Newsletter reports that the Social Security Administration now produces 3,000,000 microfiche per year via COM, and is converting all records from roll film to fiche. Recognition Equipment, Inc., of Dallas, Texas, has developed an image-processing method that microfilms and indexes documents at the same time they are being optically read or sorted by the company's existing readers and sorting equipment, as well as a family of four compatible COM devices.

Dr. Robin Alston, chairman of Scholar Press in Menston, Yorkshire, England, has announced the perfection of "a camera that can photograph the half-open pages of a rare and fragile book and reproduce them perfectly for printing—." The camera reportedly operates through a prism and is connected to a computing device that automatically determines the exact exposure necessary.

Further testing of the prototype of a "Bibliographer's Camera" developed by the R. A. Morgan Company has been discontinued.

An account of a discussion held at a Facsimile Forum held in New York on March 24 is published in Data Systems News. The questions considered were what characteristics are desirable in today's equipment and what characteristics will manufacturers attempt to achieve in the future.

Ampex offers a Videofile Information System which converts paper documents into television-type electronic images. The electronic images, with identifying addresses, are automatically filed and stored in compressed form on magnetic tape. Any individual document page image can be automatically retrieved, looked at in its original size, purged, reorganized with other images, or reproduced into a paper document. Recalled document images are displayed as images on a television screen or reproduced as hard copies. The major limitations of this system are the cost of the equipment and the quality of the image.
The Joint Council on Educational Telecommunications recently announced that the prospect of video recording and/or playback devices for job-related, educational, and home use are growing increasingly promising, while the problem of keeping track of each new development has become enormously complex.78

Electronic Video Recording (EVR), an advanced system developed by CBS Laboratories, Stamford, Connecticut, makes it possible to play prerecorded programs over ordinary television sets. It has been cited as one of the 100 most significant new American products of 1969 by Industrial Research, Inc., in cooperation with the National Conference on Industrial Research. EVR stores pictures with sound for playback through a standard television set. Any motion picture, videotape, or live television presentation can be recorded for distribution on EVR. CBS will not manufacture the EVR system itself; instead, the company will license its production among leading manufacturers. Motorola, Inc., is the first American firm licensed to manufacture EVR players for mass deliveries in North America starting in July.79

"Time Inc. has announced that it will enter the field of prerecorded television as a creator and marketer of programming for the rapidly developing new medium. The nation's largest publisher has formed a new subsidiary, Time-Life Video, to develop programming and roles in cartridge television. Like everyone else, Time Inc. wants to cash in on the ballooning market soon to be created by the CBS electronic video recording device, which will make possible home playback of video material—marketed, presumably, in the manner of long-playing records."80

Standards are not only needed for COM equipment, computer software, microform formats and reduction ratios, and microfilm cartridges, but also for video recording. For several years electronic engineers have been developing prerecorded video cassettes to be inserted directly into television sets, playing back not only the sound but a color picture as well. Although there are many manufacturers who have announced their intentions of entering the video playback market, there is, at present, no agreed upon standard method among them. Companies that have thus far announced their intention to sell playback devices for use with home television receivers are as follows: American Photocopy, Ampex, Arvin, AVCO, CBS, Japan Victor Company, Matsushita, North American Philips, Norton Simon, RCA, Shilbaden, Sony, Teldec, and Toshiba.81

The Compufax Company of Detroit, Michigan, employs a new microfilm technique called Micro-Monitor Reporting to record daily television newscasts and other programs on 16mm microfilm and ¼" audio tape. Newscasts and program material are taken off the air intact by five-second lapse time microphotography and full-time audio recording. Both film and tape are then combined in a single two-compartment cartridge and played in a special 16mm audiovisual device. Libraries may subscribe to the Micro-Monitor Reports on a
yearly basis or order selected programs as required from the Compufax television bank.\(^8^2\)

A description of a microform system recently adopted by California's Wells Fargo Bank for its Credit Card File is noteworthy because of the combination of equipment it employs. The major components are a Sanders-Diebold 550 information retrieval system consisting of six microform transmitter stations, four Diebold 6600 Series mechanized files, and fifteen remote desk-top viewing monitors. A Recordak Lodestar reader-printer is employed where original size hard copies are required from any of the more than 400,000 credit card accounts. A Bell & Howell Reader-Filler is employed to insert new film into transparent color-coded microfiche jackets. COM technology was employed to transfer magnetic computer tape information to microfilm images.\(^8^3\)

Eastman Kodak Company announced a new microfilm printer that provides dry positive prints from either positive or negative microforms. The Recordak printer, model ERG, is compatible with the entire line of Microstar and Motomatic readers. The cost of a 8½" × 11" print produced in about ten seconds is approximately five cents. With the introduction of newer equipment the Recordak MPE Reader is no longer available.

Kodak offers a “Four-Track” System which permits filming four images across a strip of 35mm film.

Gateway Research Company of La Crosse, Wisconsin, has demonstrated a microform information system employing an 8mm snap-in, no rewind film cassette, and a motorized microfilm viewer about the size of a cassette tape recorder. This system is designed for use where mobility and portability are key factors; the reader weighs only three and a half pounds.


Not only is Neiman-Marcus of Dallas, Texas, now offering a small Honeywell computer for the kitchen for $10,000, but it also offers all the Helen Corbitt cookbooks on microfilm cassettes, with a viewer, for $350.\(^8^4\)

Image Systems, Inc. has made a preliminary announcement of SRD/CompCard, a new microfiche retrieval system which will utilize the company's existing CARD system to provide complex index manipulation capability coupled with rapid and automatic document retrieval. The company shipped its first system to NTIS in October.

A pilot program began the first of the year in Bournemouth and Southampton, England, to confirm projected savings from employing the CARD microfiche retrieval display system, manufactured by Image Systems, Inc. It is planned ultimately that the sixty-two separate tele-
phone directories utilized by 2,000 directory inquiry operators throughout the United Kingdom can be replaced by this system.

A descriptive directory of forty-seven models of microfiche readers and reader-printers manufactured in the United States has been published by the Defense Documentation Center as a service to potential and established microfiche users. All known microform viewer manufacturers and distributors in this country were contacted; the prices and related data given by the cooperating companies are as of January 1970.

DASA Corporation has issued a brief booklet promoting its low-cost, lightweight microfiche reader PMR/50. It also provides information on the state of the art of micropublishing. The list price of the PMR/50 reader is $89.50, with a discount available for quantity orders. An evaluation of this reader will appear in Library Technology Reports (LTR) next year.

Microdisplay Systems, Inc., a subsidiary of Retention Communications Systems, Inc., showed a prototype of a "book size" microfiche reader in midyear. This compact, lightweight reading machine is scheduled to be marketed in June 1971. The manufacturer's brochure suggests that this reader could be employed in libraries in a "rent-a-reader automat" mechanism, as well as in a "tilting screen microcarrel."

The firm Micrographic Technology has demonstrated a do-it-yourself step and repeat microfiche camera-processor.

Varian Associates demonstrated a prototype microfiche reader-printer at their annual meeting early in the year. This equipment employs an electrophotographic, nonsilver process which Varian originally announced in December 1968. The Varian ADCO 626 Microfilm Storage and Retrieval System claims the ability to retrieve microfilmed documents within ten seconds without the necessity for a computer. This system reportedly can provide hard copies at any remote terminal and can be expanded modularly without affecting retrieval time.

Information Design, Inc. (IDI), of Menlo Park, California, introduced a Compatible 16/35 microfilm reader designed specifically for library use. The 24" square screen presents a full newspaper page. The magnification is 19X and the reader accepts 16mm and 35mm microfilm in reels or in ID's cartridges. The price with manual film transport is $680, or $865 with motorized film transport. This microfilm reader is also being distributed by Gaylord Bros., Inc. An evaluation of this equipment is scheduled to be published in LTR next year.

IDI also offers a music system comprised of a microfilm file of more than 400,000 pages of "all major public-domain music in modern notation, scores and parts" at a cost of $2,840. This film can be used in conjunction with a Xerox Microprinter to provide hard copy. Another IDI service offered is a subscription to the current "Cardset" microfilm file which includes all of the books in the English language.
from LC's MARC tapes. (A COM device is employed to record MARC tape images on microfilm.) The delivered cartridge film is designed for use with a card stock loaded Microprinter to produce reproductions of LC cards at a direct cost of five cents per set. The 1971 subscription cost for Cardset System 100 is $2,480.

In addition, IDI offers a Model 702-1 drive train to attach to 3M's "Executive 1" reader-printer to equip it to handle 16mm or 35mm cartridge microfilm. The cost is $325 for the converter, $1.25 each for 16mm cartridges, or $1.85 each for 35mm cartridges.

Library Microfilms and Materials Company (LMM) of Culver City, California, has now placed its Superior Library Microfilm Reader in more than 100 libraries. This excellent quality film carrel reader allows the patron to read a full page of large daily newspapers the same way he would read books and papers in a study carrel, at a desk, or at a library table. LMM advertises that: "You no longer sigh when you hear that the library has the material you need—on microfilm."

Birch-Caps, Limited, of London offers a Project 1 Electrostatic Microfilm Reader-Printer that makes positive prints from 35mm microfilm (negative or positive) rolls, aperture cards, strips, or microfiche.

A comprehensive, illustrated analysis of office copiers, including detailed charts on acquisition or rental cost, size, production speed, and many other features appeared in the December issue of Administrative Management. A similar guide appeared in the October issue of Business Graphics.

IBM announced a new pricing plan for its plain paper copier introduced in April. The new monthly rental of $215 includes the first 5,000 copies. Each additional copy will cost 2.3¢, but only up to a maximum total monthly charge of $575 (20,652 copies). Charges for paper and toner are not included in rental prices. The sale price of the copier is $19,200. Unfortunately, this copier cannot be used with books exceeding ¾” in thickness. Xerox has filed a lawsuit charging IBM with patent infringements.

Xerox has announced a coin-operated Microprinter for use primarily in libraries. The coin mechanism, which can be set to charge five to twenty-five cents, makes change. Xerox's basic monthly charge to libraries for the unit is $178 plus per copy charges ranging from five to three cents.

The Xerox Corporation has announced the Xerox 4000 copier which is a console machine with the capability of reproducing photographs and other half-tone materials at the rate of forty-five copies per minute.

Arcata Microfilm, formerly Atlantic Microfilm Corporation, offers a Library Dupli-Card Service to assist libraries in obtaining copies of library cards quickly and economically. Subscribers to the service are provided with a desk-top 16mm camera and film to expose the number of card copies needed. The exposed film is sent to the nearest...
Arcata Microfilm service center and it is claimed that within five days the number of hard copy duplicates desired are returned at a cost of two to five cents per duplicate. Arcata offers to add subject headings on the duplicates as they are processed as well as choice of approved quality library card stock.

Information Dynamics Corporation (IDC) now offers three Micrographic Catalog Retrieval Systems (MCRS-100, 500, and 800) as acquisition and cataloging tools on microfiche. A title index is available as an option to the latter two systems. U.S. Reprint Service of Wakefield, Massachusetts, a subsidiary of IDC, offers photo-offset reproductions of LC catalog cards from 1953 to date in standard sets of eight cards at fifty cents a set.

An evaluation of the IDC Catalog Retrieval System in an academic library, describing the costs, problems, and the specification of the microfiche reading machine and the various reader printers tested at Mills Memorial Library, McMaster University appeared in the summer issue of LRTS.91

Three commercial services offering microfiche of Library of Congress catalog cards are evaluated in an article in the September issue of Special Libraries.92 Each system is described and compared on the basis of quality of fiche image and potential card image, cost, content, indexing, etc. The findings on the generation of the fiche supplied and the legibility quality are particularly interesting.

Library Micrographic Service, Inc. has developed a fully automated cataloging technique (FACT) which is available on an annual subscription basis.93 A microfilmed data base of currently issued LC proof-sheet cards is issued in microfilm cartridges every two weeks, while the author, title, and microfilm data base location are entered into a computer by an optical scanning process. These are computer-sorted to create a comprehensive index to the main entry data base. This index is then processed through a COM to create the index on cassette microfilm. The system is supplied with two microfilm reading machines. The indexed portion of the system is viewed on one reader, while the second machine is a reader-printer with a keyboard which accepts cartridges of LC entry data and automatically finds the entry identified by the index. A button is pressed and the LC proof is produced, ready for card-set production.

Professional Activities

The second session of a Rare Book Libraries Conference on Photo-reproduction was held at Yale University on April 25, while the third session took place at the Newberry Library, Chicago, on October 24. These were follow-up meetings on the initial conference held at the Folger Library on October 25, 1969. Mr. O. B. Hardison of the Folger Library in Washington, D.C., has been named permanent chairman of the conference. A resolution concerning cost and permission fees for the facsimile reproduction of books and other library materials has
been drafted. A fourth meeting is scheduled for March 6, 1971, at
the University of California at Los Angeles.

Efforts to develop a single loan-photocopy application form to serve
both regional and national needs in England are encouraging. A book
application form which can be used by the Regional Library Systems
and the National Central Library has been introduced.94

A list of questions that should be answered before any agreement is
made between a library and a commercial firm to exchange serial sets
for microforms has been developed by the RTSD Bookdealer-Library
Relations Committee.95

Librarians should particularly examine chapter five, "Photocopy,
Copyright and Reprinting," and chapter eight, "Dissertations and
Theses on Microfilm," in the new Interlibrary Loan Procedure Manual
published by ALA.96 The appendix includes an academic libraries sup-
plement to the Directory of Institutional Photocopying Services; it
lists forty additional libraries and gives microfilm and photocopy
rates where applicable.

A National Symposium on New Technology for Image and Data
Recording, sponsored by the National Archives and Records Service,
was held June 9–10 at the Department of Commerce. Sessions included
topics such as new developments in microfilm technology, microfilm
equipment selection criteria, COM, and video tape as a document re-
cording medium.

An Innovations in Communications Conference was held April 9–10
at the National Bureau of Standards. The conference, sponsored by the
Potomac Valley and Baltimore chapters of ASIS in cooperation with
CFSTI (now NTIS), was designed as a meeting in miniature for infor-
mation scientists unable to attend the national ASIS conference. The
published proceedings are available from NTIS.97

For the spring quarter of 1970 the Graduate School of the Univer-
sity of California at San Diego offered a twelve-week extension course
entitled "Introduction to Microfilm Systems." This course was taught
by Gus Bujkovsky, past president of the San Diego chapter of the
NMA.

The New York Public Library Photographic Service announced new
rates beginning July 1.98 The announcement stated: "The Division
has not increased its rates since 1964, with the result that the Service
has been operating at a deficit. The new schedule affects primarily
minimum charges allowed and service charges related to processing."

Work on the design and fabrication of prototypes of a standard
16mm microfilm container has progressed at the U.S. Army Munitions
Command at Picatinny Arsenal. According to a progress report issued
in September a contract for part of the work to be performed has been
issued to Cryptanalytic Computer Sciences, Inc. of Boonton, New Jer-
sy.99 ANSI Committee PH5.1, Subcommittee Task Group on 16mm
Microfilm Containers, met several times during the year to review pre-
liminary standards for single- and double-core containers.
Two papers given at the Special Libraries Association (SLA) Conference in Montreal in June 1969 at a Joint Meeting of the Picture Division and the Reprography Committee were published in March. These articles urge consideration of the impact of facsimile systems in terms of quality, speed, and economics in library applications and describe how microfilm and the computer can be combined in various ways to improve library service.

Another Montreal SLA paper was published in the July-August issue of *Special Libraries*. This article describes a program, initiated in cooperation with a commercial microfilm firm, to microfilm basic scientific periodicals sets in chemistry, physics, and biology and to service them to readers in 16mm cartridge format with reader-printers available in the reading room. Library user and staff reaction is discussed and a brief description of space requirements for films, reader-printers, and storage of supplies is also included.

The SLA Reprography Committee has been dissolved as a standing committee. Functions of this committee will be continued by special representatives.

At a meeting in Frankfurt am Main, September 23 and 24, 1969, the Permanent International Committee for Reprography was disbanded in favor of a new organization, the International Council for Reprography. The Third International Congress on Reprography will be held in London, March 15-19, 1971.

The twelfth meeting of the International Standards Organization (ISO) Committee TC46/SCI, Documentary Reproduction, was held in Paris, March 9-15. Four working groups were assigned to discuss the preparation of ISO recommendations for standards for microfiche, microforms of engineering drawings and newspapers, and an international glossary.

Drafts of format and coding standards and a Glossary Standard for COM developed for the NMA COM Standards Committee have been published as proposals for comment.


Dr. Jerrold Orne, in a brief paper given at the NMA Convention in San Francisco in April, entitled "Research Libraries and Microforms," urged that NMA direct its efforts to developing simple equipment and material, making a determination of user needs, and giving greater attention to the problems of standardization.

Also at the NMA convention, C. Allen Merritt, chairman of Library Services, IBM Corporation, monitored a panel on the subject, "The Library Uses Microfilm—Today and Tomorrow." Panel members were Carl Spaulding (CLR), Ben Liptez (Yale), Charles LaHood (LC), Francis Spreitzer (USC), and Charles Stevens (MIT). The year-round trade show to be provided at a microfilm center in New York, that was being planned by NMA, has not materialized. NMA is preparing a microfilm primer to be edited by Dr. Vernon D. Tate.
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The Processing Department of the Library of Congress in 1970

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Washington, D.C.

Introduction

Among the many highlights of the year in the Processing Department were the following:

Expansion of the NPAC Indonesian multiple acquisitions program to include Malaysia, Singapore, and Brunei.

Extension of the National Program for Acquisitions and Cataloging to Romania.

Resumption of negotiations to establish NPAC in Spain.

Transfer of the Vienna NPAC shared cataloging office to local directorship.

Launching of a pilot project for the typesetting in Tokyo of catalog cards for titles in Japanese characters.


Sixtieth Anniversary of Monthly Checklist of State Publications.

Publication of an expanded Outline of the Library of Congress Classification, a thoroughgoing revision of Class N (Fine Arts), and an outline of Class K (Law).

Significant increases in cataloging production.

Completion of work on the 18th edition of the Dewey Decimal Classification.

Tooling up for Cataloging in Publication.

Improved service by the Card Division and final preparations for Phase II of its automation program.

Establishment of two new divisions—Cataloging Management and Catalog Publication.

Speedup in publication of the current catalogs in book form.

Publication through volume 114 of the pre-1956 National Union Catalog.

Proposal for assigning Standard Serial Numbers to all new serial titles.
Arranging for publication of decennial cumulation of *New Serial Titles*.

Transfer of MARC operations to Processing Department.

Further progress in automation of acquisitions and cataloging activities.

These and other significant developments of 1970 are described in the sections which follow.

*Acquisitions and Overseas Operations*

The uncertain fiscal climate early in the year postponed expansion of the National Program for Acquisitions and Cataloging (authorized by Title II-C of the Higher Education Act of 1965, as amended) until late in 1970. The appropriation of $6,613,500 for the Program, an increase of $802,050 over last year, made possible a moderate expansion of NPAC efforts abroad with emphasis on Romania, Spain, and Southeast Asia. It has also helped to defray increases in basic costs, such as books, supplies, communications, obligatory pay raises, and the like.

Nine shared cataloging centers continued to operate in London, Vienna, Wiesbaden, Oslo, Paris, Belgrade, The Hague, Florence, and Tokyo. These centers cover a total of fifteen countries, because in addition to local publications, books published in East Germany, Switzerland, Sweden, Finland, Denmark, and Belgium are processed through them as well. Direct arrangements between LC and the national bibliographies of Australia, Canada, New Zealand, the Union of South Africa, the USSR, Czechoslovakia, and Bulgaria are working successfully, bringing to twenty-two the number of countries receiving shared cataloging coverage. In addition, three regional acquisitions centers—in Nairobi, Rio de Janeiro, and Djakarta—operated under NPAC during the year.

By the summer of 1970 the local staff of the shared cataloging office in Vienna had achieved a degree of self-sufficiency which permitted the Library to transfer its American field director back to Washington and to assign responsibility for supervision of the cataloging operation to a local employee. This brings to a total of five the number of overseas shared cataloging centers operating completely under local direction.

The long-awaited expansion of the Indonesian multiple acquisitions program to include Malaysia, Singapore, and Brunei took place in August 1970. There are fourteen participants in the expanded program and twelve in the Indonesian program proper. The bimonthly accessions list issued by the Djakarta office has been renamed the *Accessions List: Indonesia, Malaysia, Singapore, and Brunei* and became a monthly starting with the November issue. The willingness of research libraries to support this program financially makes evident the great interest in publications from this geographic area and the effectiveness of the program itself.

On October 22, 1970, several years of negotiations were brought to
a successful conclusion when the director of the Central State Library of Romania and the Librarian of Congress formally signed a shared cataloging agreement on behalf of their respective institutions. The agreement is to take effect on January 1, 1971, and should result in the rapid and comprehensive provision to the Library of Congress of Romanian publications and of bibliographic information about these publications. The bibliographic information is that prepared for the Romanian National Bibliography by the Central State Library.

In December 1970 the assistant director for Acquisitions and Overseas Operations, Processing Department, visited Spain to resume negotiations with officers of the Biblioteca Nacional and the Director General de Archivos y Bibliotecas concerning the possible establishment of a shared cataloging operation in Spain. Earlier plans for such an operation were postponed because of funding uncertainties.

The printing of catalog cards for titles in Oriental characters has always been attended by technical difficulties and corresponding delays. In order to improve the quality and hasten the availability of its cards for Japanese titles, the Library is currently engaged in a pilot project, with the concurrence of the Government Printing Office, whereby the typesetting of both the roman letters and the Japanese characters will be done in Tokyo under the supervision of the NPAC office there. The results to date have been most encouraging.

Of the many special projects undertaken by the Library's acquisitions office in Rio de Janeiro, one of the most significant was the conclusion of arrangements for the commercial microfilming of the leading Brazilian newspaper, O Estado de São Paulo, from its first issue of January 4, 1875, through August 31, 1956. The year also saw an increase of 33 percent in serial receipts, with the total number of periodical issues received amounting to 11,227. Approximately 3,300 Brazilian monographs of value to scholarship were acquired. The total number of pieces received from Brazil amounted to a grand total of 22,809.

Receipts from Eastern Africa increased from 19,073 pieces in fiscal year 1969 to 24,025 in fiscal year 1970. The third volume of the quarterly Accessions List: Eastern Africa contains the first annual index as well as the annual serial supplement.

It is still evident that the general economic recovery in Indonesia has not yet reached the publishing industry, although there is some indication that matters are slowly improving. Total receipts in 1970 were 159,077 pieces (or an average of about 14,500 pieces per set for the eleven participants including LC) compared with 190,770 pieces in 1969. The decrease was partly attributable to the withdrawal of one participating library and to the selective sending of serials and newspapers.

A detailed study of the international aspects of NPAC was prepared under contract with UNESCO by Herman Liebaers, director of the Bibliothèque Royale Albert 1er in Brussels and current president of IFLA; it appears under the title "Shared Cataloging" in the UNESCO

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Bulletin for Libraries, 24:2 (March-April 1970) and 24:3 (May-June 1970). Shared cataloging was also considered at an International Meeting of Cataloging Experts, convened by the IFLA Committee on Uniform Cataloguing Rules on August 22-24, 1969, in Copenhagen, immediately preceding the general conference of IFLA. Strong support was expressed by all the participants for the concept of a system for the international exchange of bibliographical information utilizing standard descriptions prepared by the national bibliographical agencies in the country of origin and conveyed either in printed or machine-readable form. Notes of these discussions are contained in Libri 20:1 (1970).

Acquisitions reports continue to flow in from the eighty-five participating libraries which are maintaining depository sets of LC cards. From the beginning of the program through November 1970, 497,972 reports have been searched, resulting in orders being placed for 105,508 titles. During 1970 orders were placed for 27,993 or 19.9 percent of all reports received, as compared with 26.2 percent in 1967, the first full year of the program. Hopefully, this downward trend (reflecting the increasing comprehensiveness of LC's acquisitions network in shared cataloging countries) will continue. In addition to ensuring acquisition of all important research titles, these reports help to identify the specific titles being acquired elsewhere and thus serve to upgrade the cataloging priority of current imprints received from the twenty-two countries covered by shared cataloging arrangements.

In summary, despite fiscal uncertainty early in the year, NPAC continued to make good progress toward the ultimate goal of creating cataloging data for research materials with sufficient speed that duplicative original cataloging will become unnecessary. This goal has been achieved in part and already has had a marked effect on the cataloging costs and procedures of the research library community. The amount of cataloging produced annually has roughly doubled since the inception of the program. Broader geographic coverage and greater speed in cataloging, card printing, and card distribution still must be achieved.

Public Law 480 Program.—In addition to purchases for its own collections, the Library administers a program authorized by Public Law 83-480, as amended, the Agricultural Trade Development and Assistance Act of 1954, to buy publications abroad with United States-owned foreign currencies for other libraries in the United States. From the program's inception in 1962 through December 1970, the Library acquired over 13 million items in eight countries for some 350 American libraries. In calendar 1970 comprehensive sets of English and vernacular language publications were distributed to forty-one major research libraries from one or more of the following countries: Ceylon, India, Israel, Nepal, Pakistan, the United Arab Republic, and Yugoslavia. Sets of selected English-language publications were also distributed to over 300 libraries throughout the fifty states, the District of Columbia, and Puerto Rico from Ceylon, India, Nepal, and Pakistan.
In addition to acquiring and distributing publications, each PL-480 office provides preliminary cataloging which serves as the basis for the printed catalog cards distributed by the Library of Congress. This same preliminary cataloging information is also made available to libraries by each office through the publication of periodic Accessions Lists, except in Yugoslavia. The Accessions Lists provide libraries with a unique selection tool from areas for which current comprehensive bibliographical information is otherwise unavailable. Public Law 480 offices have nearly completed distribution of lists of PL-480 code numbers identifying printed catalog cards available for publications distributed by the programs through 1968.

In August the Library's office in Belgrade distributed to participants a list of 1,595 Yugoslav serials acquired by the program there. The list includes all serials, including a selection of numbered monographic series. The Tel Aviv office distributed to participants in the Israel program in October a "Numerical List of Titles Published Annually or Less Frequently." Each participating library has been asked to select from that list the serials which it wishes to receive during the coming year.

In New Delhi, the Library's office is engaged in a microfilming project which includes eighty-six Indian, twenty-nine Indonesian, twenty Pakistani, five Ceylonese, and six Nepali newspapers and periodicals, in addition to thirty separate official gazettes of the various state and federal governments of India, Pakistan, Ceylon, and Nepal. This office added 169 serial titles to its distribution list during the first quarter of the current year as a result of a special effort to solicit publications from research and academic institutions, in addition to learned societies. Sixteen serials ceased publication or were dropped from the list during the same period. This project is continuing. Coverage of Nepalese publications has improved significantly in the past few months thanks largely to the Library's new blanket order dealer in Kathmandu. The total number of monographic titles acquired by the New Delhi office has dropped by over 20 percent during the first quarter of this year, however, due to a severe paper shortage in India which threatens to become worse.

An important project is now nearing a successful resolution. The romanization table for Sindhi, which the New Delhi office has worked on for some time, has been accepted by the Library of Congress and referred to the American Library Association for concurrence. As soon as a final decision is reached, LC will begin printing catalog cards for Sindhi publications.

In the United Arab Republic, acquisitions have continued to increase steadily. During the first ten months of 1970, 50 percent more monographs were acquired than during the same period in 1969. The Cairo office is now attempting to provide selective coverage of Lebanese, Syrian, and Iraqi publications.

Discussions between Polish authorities and officials of the American
Embassy in Warsaw concerning the proposed Public Law 480 program in Poland have continued, but there is as yet no evidence of significant progress.

**Acquisition and distribution of federal documents.**—The Federal Documents Section was officially established on March 6, 1970, for the purpose of bringing together in a single section all activities involving the acquisition and distribution of federal documents. To a nucleus comprising the former U.S. Government Publications Bibliographic Project were added the Documents Expediting Project and three additional staff members whose work has exclusively been concerned with the handling of federal documents. The Section has responsibility for maintaining the exchange mailing list for federal documents and the federal duplicates collection, as well as acquiring federal documents, both from the Superintendent of Documents and other federal distributors, and compiling non-GPO imprints bibliographic information. The Documents Expediting Project has retained its own name and continues to serve its members as before. The Federal Documents Section appears to be successfully achieving the centralization of federal documents procurement and distribution that was originally sought through this reorganization.

**Non-GPO imprints.**—Non-GPO Imprints Received in the Library of Congress, July 1967 through December 1969: A Selective Checklist (v. 73pp.) was issued late in August 1970. The publication attempts to bring under bibliographical control some of the United States Government publications printed outside the Government Printing Office. Prepared by the Federal Documents Section, the Checklist is limited to those non-GPO imprints deemed to be of some research or informational value and which fall outside the scope of the Monthly Catalog of United States Government Publications as well as the other main bibliographies of United States Government and government-sponsored publications.

The Checklist is divided into two sections. The first contains 1,112 monographs and monographs in series. These entries are arranged alphabetically by corporate heading and numbered so that they may be approached through the subject index. The other section lists periodicals, also arranged alphabetically by corporate heading, but unnumbered since no subject headings have been assigned to them. The Checklist is for sale by the Card Division for $1.25.

The Exchange and Gift Division is most interested in learning of users’ reactions to Non-GPO Imprints. Comments and suggestions of librarians and other users of U.S. Government documents would be appreciated; address them to the Chief, Exchange and Gift Division, Library of Congress, Washington, D.C. 20540.

**Non-GPO listings in the Monthly Catalog of U.S. Government Publications.**—The Monthly Catalog is now listing nearly all of the agency-printed U.S. Government documents referred to it by the Exchange and Gift Division’s Federal Documents Section, omitting main-
ly those which are considered purely administrative or local in character; preliminary reports; maps and telephone directories not sold by the Government Printing Office; items on which the name of the issuing body is not given; programs of meetings; and publications which cannot be reproduced or distributed without the permission of the issuing agency. It is from this body of material that selections were made for inclusion in Non-GPO Imprints reported above. Of the 1,740 publications sent to the Monthly Catalog editorial staff for consideration from July 1, 1970, through November 30, 1970, 1,621 were entered in the Monthly Catalog. Of the remaining items, eighteen titles were rejected and 101 returned as duplicates of items already received by the Monthly Catalog.

State documents.—In response to recommendations set forth in the introduction to the sixtieth anniversary issue of the Monthly Checklist of State Publications (December 1969), the Council of State Governments has included in its annual publication, 1971 Suggested State Legislation, a suggested model law to require the deposit of state publications in the Library of Congress. At present, twenty-one states have enacted laws requiring distribution of specified types of publications to the Library and nine have laws requiring at least one copy of each state publication to be sent to the Library. The suggested legislation specifies that copies of the session laws, codes, statutes, sets of legislative journals, copies of court reports, and all other official publications be sent to the Library, and specifies the number of copies desired by LC. The suggested legislation is offered with the advice that this type of action has proved to be a very effective means of broadening the coverage of the Monthly Checklist of State Publications.

Disposition of surplus materials.—In a circular letter dated November 2, 1970, the Librarian of Congress reminded federal libraries in the Washington, D.C., metropolitan area to send surplus materials to the Library of Congress to screen for possible selection and addition to its collections and to use in its various programs for distribution of surplus library materials. In return, surplus materials are offered to federal libraries on a transfer basis, as well as to nonfederal agencies on an exchange or donation basis. A special note was sent, along with the circular, to federal libraries outside the Washington area, drawing their attention to this program and inviting their participation through the designation of representatives to select duplicates on their behalf. These libraries were also invited to send duplicates of more than ordinary value because of rarity, cost, or importance in coverage of their special subject fields. Through these means the Exchange and Gift Division hopes to stimulate continued and expanded participation of the federal library community in this surplus disposition program.

Cataloging

1970 was a year of continuing progress in cataloging production at
the Library of Congress. In the early part of the year, despite stringent limitations on staff expansion, the relatively well-trained and stable staff of the cataloging divisions was able to continue at its high level of production and to complete work on over 218,000 titles destined for printed cards during the 1969/70 fiscal year—an all-time high. More than this, however, the descriptive cataloging divisions during the same period were completing their work on over 250,000 new titles, the excess accumulating at the subject cataloging and shelflisting stages. In the latter half of the year, with more funds available, the staff for these operations was built up. Increased production was felt first in the shelflisting work, and by the end of the year, its backlog of work had been drastically reduced and will presumably be eliminated after a few more months. Due to problems in locating some needed subject specialists and the time required to complete training, the effects of building up the subject cataloging staff have not yet been realized. Yet with a little more time, the capacity of this staff will not only be equal to its workload but will also make possible the working off of some of the accumulated backlog.

**Cataloging rules and romanization tables.**—More than twenty additions and changes in the Anglo-American Cataloging Rules, including revisions of the rules for Thai and Indonesian names, were proposed by the Library of Congress and approved by the ALA Descriptive Cataloging Committee. They will be published in Cataloging Service, Bulletin 98, now ready for the printer.

The Library's draft revision of Chapter 12 of the Anglo-American Cataloging Rules, relating to motion pictures, filmstrips, and similar audiovisual works, remains under study. The Library sent a questionnaire to subscribers to LC catalog cards for audiovisual materials and to audiovisual specialists asking their preference as to main entry for audiovisual materials.

The romanization table for the Tibetan language was published in Cataloging Service, Bulletin 90. The Library's proposal for Amharic is under consideration by the ALA Descriptive Cataloging Committee and its proposal for Sindhi will be presented to the committee for consideration at the earliest possible date. A revision of the present table for the romanization of Greek, which makes certain special provisions for modern Greek, is also under consideration by the Descriptive Cataloging Committee. The most recent development is that of a romanization table for the Georgian language, now under study at the Library. The revisions of the romanization tables for languages using the Arabic alphabet, mentioned in last year's report, are now in press.

**Cataloging in Publication.**—Throughout 1970 the Library, together with the Association of American Publishers, cooperated closely with Verner Clapp of the Council on Library Resources, Inc., in his investigation of the feasibility of a full-scale Cataloging in Publication (CIP) program. The faults of the original Cataloging-in-Source Project were analyzed, and the LC design for a new program that would avoid most
of the defects of the earlier one was accepted. The new concept is that what are of primary importance to consumers are the elements of cataloging that represent professional cataloging decisions and headings and classification assignments that conform to the LC system. Thus Cataloging in Publication will provide the main entry and the added and subject entries, all in the form of established LC headings. It will provide all of the bibliographical notes made by the cataloger. It will provide the LC call number, the Dewey Decimal Classification number, the LC card number, and the International Standard Book Number. Given this information on the verso of the title page, a library receiving the book is in a position to process the physical book and make it available for use just as soon as its call number is determined. The library can make its own catalog cards providing it has (1) a subprofessional typist who has been trained in how to transcribe a title page and record collation and (2) facilities for making catalog cards. Or, alternatively, it can process the book and send it to the shelf, make temporary slips for the shelflist and the catalog, and order cards from LC or some other card service. In either case, however, there is no need to hold up the book.

Under this concept of Cataloging in Publication, cataloging at LC can be done from galley proofs. Page proofs are not required. This means that cataloging can take place many weeks, even months, earlier in the cycle of book production.

The design of the new system having been settled, the next step was to determine if a program along these lines would actually be utilized by libraries on a scale that would justify its adoption. Mr. Clapp prepared a carefully worded questionnaire which was sent to 391 libraries and processing centers selected by type and size. The results of this questionnaire were reported by Mr. Clapp at the ALA Conference in Detroit. In summary, 59 percent of those receiving the questionnaire replied, and of these, 65 percent stated they would greet the program with enthusiasm, while another 32 percent would welcome it with interest. Even more significantly, 71 percent stated that if the bulk of American trade books contained cataloging information they would use this information in making their own cards, while another 20 percent would use this information for temporary control purposes.

Having completed this phase of the preparatory work, Mr. Clapp turned his attention to ascertaining the willingness of American publishers to participate in the Cataloging in Publication program. This effort took two forms, first the preparation of a written communication that carefully explained the nature of the program, the values of the program to libraries, and the advantages it would have for publishers. It concluded with a request for a statement of willingness in principle to participate in the projected program. This letter was sent out to all the members of the Association of American Publishers under the auspices of the Association.

The second part of this effort was the convocation of publishers in
an open meeting in New York on September 21, which featured a panel (moderated by Ann Heidbreder of the Association of American Publishers, Inc.) consisting of Mr. Clapp, a librarian (Connie Dunlap of the University of Michigan), a publisher (Leonard Schatzkin of McGraw-Hill), and an LC representative (Sumner Spalding). Here the program and its expected benefits were described in detail and, equally important, there was full opportunity for publishers to ask questions and express their reactions. This meeting was quite successful and Mr. Clapp received a hundred or so favorable replies from as many publishing houses. The Association and Mr. Clapp agreed that we had all the evidence that was needed to conclude that CIP would get broad participation from the book publishing industry.

With this green light only two phases of the preparatory work remained: (1) securing the funds to set the program into motion and (2) developing the detailed procedures for LC to operate the program. Work on the latter had already been underway for some time at the Library of Congress so that it was possible for LC to draw up detailed estimates of the additional costs that would be entailed to catalog books in the Cataloging in Publication mode. Accordingly, on October 22, the Librarian of Congress made a formal application for a Council on Library Resources grant to fund this program over a two and one-half- to three-year period after which, assuming its demonstrated success, Congressional appropriations would be requested for its continuing operation. The Library's plan is to build up its CIP coverage to the 10,000 title-a-year level after the first six months, to the 20,000 title-a-year level by the end of a year, and to the 30,000 title-a-year level after eighteen months.

The Council on Library Resources reviewed the proposal favorably but funds for its support were not immediately in sight. The Council is exploring other possibilities for funding to enable the Library to begin operation of the program.

Classification schedules.—In August the fourth edition of the classification schedule for Class N (Fine Arts) was published. Unlike its predecessors, this edition not only incorporates all additions and changes made since the third edition up to October 1969 but represents a thoroughgoing revision. The most striking innovations of this revision are the regrouping of numbers for similar types of publications which had heretofore been dispersed in several places (e.g., works on art collectors and patrons have been brought closer to material on private collections) and the combining in the same numerical sequence of works on the history of art in a particular medium with books of reproductions of works in the same medium. There has also been some relocation in order to provide a more logical collocation of general works and works on the techniques and materials of various art forms. A new subclass NX has been added, dealing with the arts in general, including literature and the performing arts, as well as the visual arts. This schedule is the first in a series of new editions of classi-
fication schedules that employs a new format. It has been printed by photo-offset from typewritten camera copy on one side of the page only. This type of reproduction appears to offer a considerable saving in typesetting costs and proofreading time, and it provides a suitable format for libraries using the schedule to make annotations, to punch the pages for a loose-leaf binder, and to insert pages from the L.C. Classification—Additions and Changes for updating.

The second edition of the Outline of the Library of Congress Classification was published in September. This edition is more detailed than the previous edition and reflects the extensive and more important developments in all classification schedules during the last three decades, with particular emphasis on Class Q (Science) and Class T (Technology).

In the same month a draft outline of Class K (Law) was published. This outline of the future subclasses of Class K was prepared in response to requests from other libraries for some form of synopsis of this class that will assist them (pending completion of Class K) in arranging legal collections to conform with the Library of Congress classification. As a result of the preparation of an overall notation scheme, the letters KD were assigned to British law in lieu of KE as originally envisaged. Due to a temporary shortage of staff, work on the development of subclass KD proceeded at a slower pace than anticipated and completion of that subclass cannot be expected until sometime in 1971. A fifth segment of the class KF Shelflist, resulting from the retrospective classification of holdings of the Library in the field of United States law, became available from the Photoduplication Service. Work on revised editions of Classes T (Technology) and Q (Science) proceeded toward publication in 1971.

Decimal Classification activities.—The text of Dewey 18 was completed and sent to press, with publication expected in mid-1971. Work was begun on the tenth abridged edition, so that a first draft might be made available for study to a consultant experienced and skilled in the requirements of small libraries; publication of this edition was anticipated for late summer, 1971.

Liaison was continued with British users, both in the assignment of numbers by the Library of Congress and the British National Bibliography for the same title, and in the appointment for the first time of a British representative to membership in the Decimal Classification Editorial Policy Committee. (A Canadian representative was also appointed.) As a result of the BNB's announcement that it would begin to use Dewey 18 for classification of new British titles published after January 1, 1971, beginning a new five-year cumulation which is to be arranged completely by Dewey 18, LC also decided to begin using Dewey 18 with works classified after January 1, 1971. Although some purchasers of the cards may, during the interval between January and publication of the new edition—in June or July—receive numbers for which they do not yet know the meanings, this decision made it pos-
sible to take advantage at the earliest date of the many improvements in Dewey 18. Assignment of Dewey numbers continued at the high level of the preceding two years, covering virtually all titles in English cataloged by the Library of Congress and comprising one-third of LC's cataloging output.

Cataloging instruction.—In the continuing effort to provide training in cataloging and the use of the catalog, the Cataloging Instruction Office has added four new courses. All four were developed around the needs of specific divisions in the library and two were taught cooperatively with the divisions involved. The course in the cataloging of serials was given in cooperation with the Serial Record Division to nine catalogers from the Serial Record and Descriptive Cataloging Divisions. Eight senior subject catalogers participated in the other cooperative effort, a subject cataloging seminar. A special course for bibliographers from the Library Services Division of the Legislative Reference Service was designed to give detailed instruction in descriptive cataloging according to the Anglo-American Cataloging Rules, with emphasis on the cataloging of government publications. The last course was essentially a modification of the previously taught filing course. It was offered for the filers of the National Union Catalog: A Cumulative Author List and incorporated the special rules used to file in that publication.

Automation

In June 1970 the MARC Development Office was established in the Processing Department. It assumed the responsibility for the MARC/RECON Projects and all aspects of automation involving technical processes and various operational uses of the MARC data base for the Processing and Reference Departments. The Information Systems Office in the Administrative Department continues its responsibility for coordination of the overall automation program of the Library, including budget management and projects in support of the Legislative Reference Service, the Copyright Office, and the Administrative Department.

MARC.—During the past year, the MARC Editorial Office, which marked its first anniversary on March 17, 1970, has continued to consolidate its position as a production operation. Until recently, the Current Unit, with only minor delays, kept reasonably current in converting to machine-readable form the bibliographic data for all English language monographs being cataloged by LC and in distributing this information weekly to subscribers. However, faced with higher receipts than anticipated, backlogs developed in the fall and resulted in delays in the distribution of the MARC records to subscribers. Revised procedures, use of staff assistance from other divisions, and an increase in the Current Unit's staff had been approved and implemented in part by the end of the year and should, in time, restore the currency of the MARC Distribution Service. Despite these delays, the MARC
Editorial Office distributed approximately 100,000 records during its year and a half of operation. With the addition of new equipment in the Library's Computer Service Center, the Library has assumed responsibility for all aspects of the distribution service. Until recently, duplication of tapes for the subscribers was done by Argonne National Laboratory. Technical problems relating to the duplication and distribution of the tapes should in the future be referred by the tape subscribers to the Card Division.

Design specifications are underway for a new MARC Processing System. The new system, to be designed as a data utility, will be capable of processing machine-readable records regardless of the source of the record (e.g., preliminary cataloging, Geography and Map Division, etc.); the content of the record (e.g., the bibliographic description of a book, serial, map, etc.); or the master file in which the record will eventually reside. The system will include all the processing required to store, maintain, and retrieve records in both on-line and off-line modes and can maintain files on either disk or tape. Access to records will be provided by a variety of indexing methods, i.e., unique number, author, title, etc. The on-line subsystem will also include the display logic for several terminal devices such as a CRT or typewriter-like device.

Work is continuing on additional MARC formats. Maps: A MARC Format and Serials: A MARC Format were published by the Government Printing Office in the summer and are available from the Superintendent of Documents. Formats for film material, manuscripts, and sound recordings are in process.

RECON.—The RECON Unit, the production aspect of a twenty-four-month study of the feasibility of converting retrospective cataloging data to machine-readable form, was established in August 1969. RECON is converting to the MARG II format the English language monographs cataloged by LC during 1968 and 1969 which have not yet been converted. The conversion of the 1969 and "7" series cards representing English language monographs has been completed, and the conversion of the 1968 cards is now in process. The RECON 1969 records (approximately 9,000) will be made available free to the MARC Distribution Service subscribers on request and on receipt of a tape for processing.

Several studies are being undertaken as part of the RECON Pilot Project. The Library is developing a technique called format recognition, which will allow the computer to process unedited catalog records by examining data strings for certain keywords, significant punctuation, and other clues to determine the appropriate tags, indicators, and subfield codes. The logical design of format recognition has been published as a separate report by the American Library Association under the title, Format Recognition Process for MARC Records: A Logical Design. The programs are expected to be operational in February 1971.

Investigation of various input devices for possible use in the MARC
System has been continued, and devices which were given serious consideration included the Keymatic Data System Model 1093, the CompuScan Model 370, and the Irascope. The Keymatic has 256 unique codes which are recorded directly on computer-compatible magnetic tape. In addition, the Keymatic has certain keys, called expandables, to which the value of whole strings of characters can be assigned, i.e., a single key could equate to a MARC tag. During a two-month period, two MARC input typists tested this device, and the results showed that typing rates did not increase significantly over the rates produced on the Magnetic Tape Selectric Typewriter (MT/ST) presently in use. The typists also reported difficulty in determining when to use the expandable keys instead of typing the data character by character, and in correcting typing errors because of the lack of hard copy from the Keymatic. Since the cost of the Keymatic is considerably more than the MT/ST, it was determined that the Keymatic in the Library of Congress environment would not offer any advantages over the MT/ST.

A test for the CompuScan Optical Character Reader was conducted using twenty-five letter press LC printed cards, and several problems were encountered: (1) the coarseness of the card stock caused identical characters to be read as different characters or additional characters to be generated by the scanner; (2) because of “touching” characters, the scanner would read two distinct characters as one because of a connection between the two letters; and (3) fine lines in certain characters caused a misreading of the character, e.g., the letter “e” was interpreted as the letter “c.” Further investigation of this device is being continued.

Another device which was investigated recently is the Irascope, a cathode ray tube device produced by Spiras Systems. It has the capability of displaying 128 characters and contains editing capabilities which would be beneficial for the MARC System and other Processing Department automation projects. Additional study of this device is being carried out in cooperation with the Ohio College Library Center.

Since the production operations of the RECON Pilot Project have been limited to English language monographs in the 1968, 1969, and “7” series card numbers, it was recognized that many problems concerning retrospective records would not be revealed in the conversion of relatively current titles. For this reason, a study to identify and analyze 5,000 older titles was included as part of the pilot project. These titles consisted of records for older English language monographs and foreign language monographs in the roman alphabet. The study revealed the necessity of having a higher level of personnel to process retrospective and foreign language material because of the need to interpret different cataloging rules, to be proficient in foreign languages, etc. The investigation also revealed the difficulty of expanding the MARC Distribution Service or the format recognition algorithms to foreign language because of a lack of consistency in shared cataloging copy.
Several research projects have also been undertaken by the RECON Working Task Force, a working group of outside librarians. A study on levels of completeness for MARC records has been finished, and the report was published in the June 1970 issue of the *Journal of Library Automation*. Investigations are also being conducted on the implications of a national union catalog in machine-readable form and the possible utilization of other machine-readable data bases for use in a national bibliographic store.

Staff members involved in the RECON Project and in the MARC System have been working closely with the technical staff for Phase II of the Card Division Mechanization Project in developing printing specifications for the Videocomp printed card production.

Progress reports of the RECON Pilot Project have appeared in the June and September 1970 issues of the *Journal of Library Automation*. The Library will continue to disseminate information concerning the pilot project in this fashion until the project is terminated.

**Other Processing Department automation projects.**—The MARC Development Office is also responsible for several automation projects in the Processing Department involving the Order Division, the subject headings list, a combined classification index, serials, book catalogs and filing, and the Process Information File. In addition, MARC staff members are also involved in the plans for Cataloging in Publication.

The design and detailed specifications for Phase I of the Order Division Project (automation of regular orders) has been completed, and the actual programming for this phase has begun. Phase I consists of three tasks: Task I includes file conversion and the procedures and programs to record regular order information and to print via the computer basic documents such as the purchase order, dealer slip, order file slip, process file slip, notification to recommending officer, and obligation record; Task II consists of the fiscal control subsystem; and Task III is the process control subsystem. Task I is scheduled for completion in February 1971, and Tasks II and III will be started in the spring of 1971.

A processing system is being developed that will enable the Library to assume the responsibility of file maintenance and publication of the LC Subject Heading List. These tasks are presently being handled by the Government Printing Office. Functions to be performed include: conversion of records from the GPO printing format to the MARC subject headings format; implementation of a file maintenance system to correct these records; and publication procedures to prepare the data for output via the Linotron. Many of the same programs will also be used to maintain the file and produce the Combined Index to the LC Classification Schedules. The initial work for the combined index project is expected to be carried out by the Columbia University School of Library Service, under contract to the Library of Congress.

During the past year, work has continued on the serials format in terms of updating and its eventual republication. Simulation of the
processes necessary to convert serial information into machine-readable form has been carried out in cooperation with the staff of the Serial Record Division. Work is also in process to expand the MARC system to accept serial data so that serial titles can be input for special projects such as the Main Reading Room and Science Reading Room Catalog Projects.

Abbreviated computer-produced book catalogs using MARC data have been developed for the Main Reading Room and Science Reading Room reference collections. These catalogs will be produced using an existing generalized print program. Investigations are also underway to study the problems of producing more complex and sophisticated products such as the National Union Catalog using photocomposition devices. The Library of Congress catalog for motion pictures and filmstrips has been selected as the first major book catalog to be produced from machine-readable data via a photocomposition device. Actual implementation of this project will not begin until fiscal year 1972.

One of the biggest problems connected with the production of large book catalogs has been the difficulty of programming to arrange bibliographic entries according to established library filing rules. As the first step in solving this problem, a simplified filing arrangement has been proposed by the Technical Processes Research Office.

Staff members from the MARC Development Office have been working with the Descriptive Cataloging Division in planning for Cataloging in Publication. CIP records will be converted to machine-readable form after all the CIP cataloging data have been added and will be distributed to MARC subscribers. When the book is received in the Library and the additional cataloging data have been included on the catalog record, the full MARC record will be produced. CIP records will not be transferred to the Card Division for printed card production until they have been updated to a full MARC record.

MARC Reference Department projects.—Several projects have been undertaken by the MARC Development Office for various divisions of the Reference Department. In addition to the book catalogs produced for the reading rooms mentioned above, a weekly listing on 3 X 5 cards of all new records added to the map data base during a week is being produced for the Geography and Map Division. The cards are arranged in call number order for the map shelflist. Monthly and quarterly cumulative listings, arranged by author, subject, and geographic area, are also being produced.

MARC data base products.—Some of the special products obtained from records in the MARC data base are listed as follows. For example, retrieval by call number is being done for an American Revolution Bicentennial bibliography and the Science and Technology Division. A listing of records not in the music classification (M) with the term "music" appearing in the collation statement is being produced for the Music Division. In addition, the General Reference and Bibliography Division is receiving printouts of MARC records which
are conference proceedings or translations.

Other retrieval runs include the following: number of titles by country (a count of the number of titles on the data base from each major English-speaking country); a listing of the publisher in order of frequency of appearance in records on the data base (with a companion listing of these publishers in alphabetical order); classification number-subject heading correlation in the LC subject heading list with subject headings from the MARC records); and classification number-subject heading correlation (listing arranged by class number (listing arranged by class number with associated subject headings).

Processing Services

Card distribution service.—The year 1970 was in many ways difficult, yet it was also satisfying because the trend in the card distribution service moved steadily upward. By the end of June 1970 it was clear that the crisis in the card distribution service, of which many readers of this article may be aware, had passed. Service had improved, the transition to the complete use of machine-readable order forms had been carried out with a minimum of complaint from subscribers, and gross sales from cards, book catalogs, and technical publications reached $7,000,000—an all-time high—but still $1,000,000 less than the $8,000,000 appropriation.

Since July 1970, service on printed card orders has continued to improve. During the months of September, October, and November, orders for cards that are in stock were filled in an average of seven working days from receipt of order to shipment of cards. Using the order frequency tapes generated by the machine-readable order slips to control the reprinting and stocking of cards continues to increase the percentage of orders which can be filled immediately.

As this report is being written, the major problems facing the Card Division, now that it is able to provide better service, are finding ways of regaining some of the card subscribers who turned to other sources because of poor service, and finding ways of stimulating card orders, which are 17 percent less for the first five months of the present fiscal year than for the same period last year. Although net card sales are higher this year, reflecting the Card Division's ability to provide better service on the orders it receives, it is apparent that the volume of orders received—currently at the rate of about 10 million—must increase if the Card Division is to fulfill the legal obligation of returning to the Treasury cost plus 10 percent.

Card prices.—There was no increase during 1970 in the prices of Library of Congress printed catalog cards ordered by card number or by author and title nor will there be during the remainder of fiscal 1971 (the year which ends June 30, 1971). Although salaries and the cost of card stock continue to rise, the Library is making every effort to offset these increases by economies in operation. However, because U.S. Government regulations require that printed cards should be

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priced so that their cost plus 10 percent is returned to the Treasury, a review of card prices will be necessary in June 1971. In determining the cost of the cards, the cost of operating the Card Division, but not the cost of the staff of professional catalogers who prepare the catalog copy, is included. A factor which will affect the results of the price review is the volume of orders received. Obviously, the greater the volume, the lower the per unit cost to subscribers.

*Standard number of cards per order.*—Beginning February 1, 1971, the Card Division discontinued use of formulas for number of copies wanted and began to supply a standard set of eight cards for each order received. Present stocks of machine-readable order forms may continue to be used, but the formula for the number of copies wanted is disregarded. In most cases the new set system provides the number of cards equivalent to the former 3 SAT formula: a main entry card, a shelflist card, a card for each subject and added entry tracing, and an extra card. Although subscribers may receive one or two more cards under the standard set system than they did under the formula system, simplification in billing, accounting, and card drawing compensate for the cost of additional card stock.

*Card Division automation program.*—Funds for implementing Phase II of the Card Division automation program [see *LRTS*, 14:251 (Spring 1970)] were made available to the Library in its appropriation for fiscal 1971. The target date for implementation of Phase II is March 1971. All programs for use in the system were completed in late 1970 and ready for testing in a production environment. Renovation of the physical facility was completed in the first part of January 1971 and installation of equipment was scheduled for mid-January 1971. By the time this article appears in print, card subscribers should be receiving some orders filled through the Phase II system.

*Changes in typography on LC printed cards.*—Because of certain minor typographical limitations in the production of printed cards from masters produced by photocomposition from MARC computer tapes, the following changes in the typography of all newly set printed cards were instituted:

- Italics are no longer used.
- Corporate subheadings are in boldface in main entries.
- All other parts of main entry headings formerly set in italics are now in lightface.
- In title main entries all of the title proper is in boldface.
- All series statements subsequent to the first are given in the collation paragraph following the first series statement and are enclosed in separate sets of parentheses.
  *His, Her, Its, Their* in series statements are in boldface.
  Small caps are replaced by regular caps.
  There is no paragraphing in “dash” entries.

*Realignment of responsibility for card catalogs and publication of book catalogs.*—A reorganization within the Processing Department

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on August 1, 1970, involved the Catalog Maintenance and Catalog Publication Division and the Union Catalog Division. The former Catalog Maintenance and Catalog Publication Division was divided along functional lines to create two new divisions. The maintenance of the Library's card catalogs was assigned to the newly created Catalog Management Division while the publication of the Library's book catalogs became the responsibility of the newly created Catalog Publication Division.

The Union Catalog Division was dissolved and the reference service on book locations and bibliographic information recorded in the National Union Catalog (published and unpublished) and in various auxiliary union catalogs in Oriental and Slavic languages was assumed by the Reference Department.

The card catalogs.—The Public Catalog in the Library's Main Reading Room, containing about 151/4 million cards in 12,849 trays, was expanded during the year into 21,257 trays with a capacity of 30 million cards. This massive shift of cards will provide for a minimum of ten and a maximum of twenty years' growth.

Growth of the card catalog is but one of the management problems facing the Library of Congress and other major research libraries. Another is the need for editing. Positions were approved for an editorial staff in the Library's fiscal 1971 appropriation, and as soon as qualified incumbents for the new positions can be recruited, the editing of the Library's Public and Official Catalogs will be begun.

Guide cards are an essential element in large, complex card catalogs such as those at the Library of Congress, and in an effort to increase the number of guide cards that can be provided economically, the chief of the Catalog Management Division designed a new version of the plastic guides formerly used. The new version consists of a clear plastic sleeve into which an ordinary overprinted card can be inserted so that the overprinted heading stands above the other cards in the file and serves as the guide. No additional typing of the heading is required, and the cards may be changed as circumstances warrant.

National Union Catalog—Author List.—Efforts continue to bring out the annual cumulations of the National Union Catalog more promptly. Editing and preparation of camera copy for the 1969 annual was accomplished at an accelerated rate, and the set was distributed in partial shipments. As a consequence the earlier volumes reached subscribers well ahead of the week of November 16, 1970, when the final volumes were shipped. This was a major accomplishment because the 1969 annual was the largest ever, listing in its thirteen volumes 298,817 titles and over 670,000 locations.

As a service to the library community, the Library of Congress plans to keep the annual volumes of the National Union Catalog in print and available at their original price until they are superseded by quinquennial cumulations. The press run of the original printing of the 1969 annual was increased in order to insure that stock will be on
hand to fill future orders. The 1968 annual, which is temporarily out of stock, is being reprinted and is scheduled to be available for distribution by the Card Division in March 1971.

Books: Subjects, 1965–1969.—The editing and preparation of page copy for the *Books: Subjects, 1965–1969* quinquennial cumulation was completed in mid-November 1970 and the final shipment of copy to J. W. Edwards was made December 1—one month ahead of schedule. It is estimated that this cumulation contains 1.1 million subject entries for 650,000 titles of post-1944 imprints. This is the first *Books: Subjects* quinquennial to show the full impact of Library of Congress expanded overseas acquisitions and cataloging programs under the Public Law 480 Program and Title II-C of the Higher Education Act of 1965. The success of these programs is reflected in the size of this cumulation, which is almost twice that of the previous quinquennial, and in the extensive listings found under numerous foreign literature headings. The complete set will have 27,133 pages in forty-two volumes and will be available from J. W. Edwards at $445 per set. Delivery to subscribers is expected early in 1971.

National Register of Microform Masters.—In September 1970 the ALA Subcommittee on the National Union Catalog approved a new alphabetical format for the *National Register of Microform Masters*. Its former listing of monographs by Library of Congress card number has been discontinued and future issues will be in the form of a brief-entry, author catalog. Pertinent added entries and cross-references will be included when needed to locate a particular title. In this new format, it is expected that the *National Register of Microform Masters*, besides providing national bibliographic control of microform masters, will also be used at the local level as an analytical author catalog for the many large sets or “libraries” of microforms now available from commercial sources.

The 1969 issue of the *National Register of Microform Masters*, distributed in November 1970, lists only serials, and is a complete and updated cumulation which supersedes the serials sections of the 1966, 1967, and 1968 issues. However, the earlier issues must continue to be used to locate entries for monographs until a comparable cumulation for monographs in the new alphabetical format is completed.

Efforts are now underway to encourage improved and expanded reporting to the *National Register of Microform Masters*. In particular, it will be urged that reports be in the form of a standard catalog card entry, long proven effective in the *National Union Catalog*.

Newspapers on Microfilm.—Preliminary work has begun on the seventh edition of *Newspapers on Microfilm*. Current workload estimates indicate that this edition will include over 42,000 titles of domestic and foreign newspapers, compared with 21,700 titles in the sixth edition. A publication date for this new edition cannot yet be predicted.

New Serial Titles, 1961–1970.—A solicitation for offers to publish
in five volumes a decennial edition of *New Serial Titles* covering the years 1961–1970 was issued to prospective publishers in November 1970. The low bidder was Rowman & Littlefield. The cumulation will be priced at $149.25 per set and should be available late in 1972.

*Publication of the Pre-1956 National Union Catalog.*—From its inception through November 1970 over four million cards have been examined by the editors of the National Union Catalog Project and 2,585,385 edited cards have been forwarded in ninety-seven shipments to the Catalog’s publisher, Mansell Information/Publishing, Ltd. Volumes 1–52 and 57–114 have been published and distributed (with volumes 53–56 reserved for the Bible), eight more volumes are in various stages of printing and binding, and copy is on hand at the publisher for nineteen additional volumes.

A separate, entitled *A Bibliography of the Catholic Church from the NUC Pre-1956 Imprints*, has been announced by Mansell for release in October 1970. This section, comprising the main and added entries for the Catholic Church with its organizational and form subdivisions, amounts to some 16,000 entries. Together they constitute one of the largest bibliographies in book form of the publications issued by the administrative, legislative, and judicial organs of the Church and the largest listing of its official liturgical literature. This bibliography should be of the greatest value to all scholars and libraries interested in the field. In recognition of its special interest and to make possible the purchase of this unique body of bibliographical materials by libraries that cannot afford the complete *Catalog*, the section on the Catholic Church has been made available as a separate, self-contained volume. Represented are the holdings of the larger research and many specialized libraries in the United States and Canada.

*Technical Processes Research Office.*—As in past years, the Technical Processes Research Office (TPR) concentrated on analysis of critical areas of bibliographic control during 1970 and formulated its studies and investigations in terms of the requirements and characteristics of both manual and machine systems.

As a contribution to the resolution of difficulties in constructing, maintaining, and using the catalogs of the Library of Congress, TPR has examined the problem of file arrangement and proposed an approach that will allow a relatively small number of rules to be applied with the expectation of a high degree of consistency. The underlying principle is that elements of a filing entry are to be arranged as they appear with few exceptions. The present practice of normalizing variant forms by treating them as if they were spoken or existed in a consistent form would be abandoned.

The proposed rules still provide for grouping entries that would otherwise be difficult to find if a user did not know the precise form of the heading. Headings for persons, places, corporate names, and titles beginning with the same word or words would still be grouped separately. Categorization of subject headings by structural form,
and grouping of subject subdivisions by function (chronological, form and subject, geographical) also would be continued.

These rules are being used as the foundation for the joint effort of TPR and the MARC Development Office to devise techniques for achieving desired arrangements by computer. A conceptual framework for a full-scale filing program has been designed and algorithms are being formulated to handle specific filing situations. Techniques to handle situations not amenable to algorithmic solutions also are being developed.

Preliminary work has been done on devising a simple technique for displaying the relationships among LC subject headings by dendritic diagrams (sometimes called tree structures). This type of display will be a valuable aid in analyzing the reference structure of LCSH with a view to making it more consistent.

The set of term relation designations developed by TPR has been expanded to facilitate comparison of the structures of a wider range of indexing vocabularies. As a case study, term relation designations for selected LC subject headings have been converted to standard form by computer to permit comparison of those headings with terms in the National Agricultural Library Agricultural/Biological Vocabulary.

TPR has assisted the MARC Development Office in developing a method for merging the machine-readable tapes of the seventh edition of the LC subject heading list and its supplements. TPR's contribution has involved identifying problem areas in alphabetical file arrangement and devising manual editing techniques to be used in conjunction with editing programs to achieve the desired merge. On the basis of this analysis, TPR was able to estimate manpower requirements and costs for manual editing.

A study by staff members of the Technical Processes Research Office and the MARC Development Office describes the Process Information File, one of the Library's important instruments of bibliographic control and considers the merits of automating it. This single entry file records an estimated 357,000 titles on order or under preliminary cataloging control and gives their locations. Since the file is the primary source of information about these titles until they are represented by printed cards in the regular catalogs, it is used hundreds of times each working day by staff members in all parts of the Library.

Automating the Process Information File would allow more ways to locate in-process records, improve the quality of the file, and make possible an enhanced current-awareness service for staff members concerned with new acquisitions. An automated Process Information File might also serve as a prototype for an automated catalog. A preliminary analysis of hardware/software requirements for such a project was completed by the MARC Development Office.

TPR is intimately involved with many aspects of the development and evaluation of the Library's program to convert cataloging records
to machine-readable form both currently (MARC) and retrospectively (RECON). The Specialist in Technical Processes Research continues as a member of the RECON Working Task Force which is engaged in various studies to elaborate ideas set forth in the original RECON report. TPR also contributed to the project by making cost analyses of alternative means of microfilming RECON source documents, converting the data to machine-readable form, and carrying out the catalog comparison process.

**National Libraries Task Force.**——Since the chief of the Serial Record Division is also the chairman of the U.S. National Libraries Task Force, a brief account of the accomplishments of the Task Force in 1970 is in order here to complete this annual review of Processing Department activities.

During the year a Task Force composed of National Agricultural Library, National Library of Medicine, and Library of Congress representatives concentrated its attention on the national serials problem. It maintained close review over the ARL-administered National Serials Pilot Project, including the evaluation of procedures for inputting data from the Canadian Union List of Serials and for obtaining a variety of printouts in the MARC serial format. Work sessions with the project director and members of his staff concentrated on such matters as editing requirements, verification of the correctness of the tags, need for control numbers until assignment of the Standard Serial Number (with provision for the insertion of the SSN later), and capability for including subsequently acquired data. The system is intended to have the capability of producing a consolidated listing of the live scientific and technical serial titles held by the three national libraries, including bibliographic and management data. It is designed to provide a machine-readable data base of information about current scientific and technical serials that can be of immediate use to the scientific and library communities as well as serve as a test case for continuing investigations into solutions to the complex problems involved in establishing automated controls over serial literature.

The policies governing the cataloging of serials in the national libraries were reviewed by the Task Force and the advantages of adopting a policy of successive entries were considered, particularly in connection with the Task Force's work on the Standard Serial Numbering System. The action of the Z-99 committee on the SSN, followed by endorsements by other groups, has added an important element to the national libraries' serials automation program.

In July the heads of system planning in NAL, NLM, and LC gave detailed presentations to the Task Force on the status of the automation activities in their respective institutions. This review brought out the essentiality of standard library codes and the need to address more attention to human-factor problems in the preparation of source data. There was also discussion of machine assignment of codes, format recognition, machine identification of fields and subfields, and

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machine assignment of content designators.

The most recent sessions of the Task Force have concentrated on the problem of design and choice of entries for the National Serials Pilot Project, related preliminary planning for future assignment of Standard Serial Numbers, the relationship of the SSN to the prospective international numbering code, and planning for the next phases and funding of the national serials activity. The national libraries have agreed on policies and interim support for this basic program, including its transfer to the Library of Congress upon conclusion of the ARL sponsorship. On November 18 the Task Force sponsored a full day's discussion at NAL in a search for feasible solutions to bibliographic problems encountered by the National Serials Pilot Project in its work toward the building of a national serials data base. These problems are complicated by the fact that serial entries in the internal files of the libraries vary in accordance with the variety of rules followed over a long period of time.

The Task Force has also continued its cooperative efforts in acquisitions planning and standards development. It has cooperated with other national and international library automation projects. In May 1970, for example, it met with representatives of the British National Libraries ADP Study, which is supported by a grant of £100,000. The British study is aimed at determining the feasibility of applying automatic data processing to the operations and services of national libraries, exploring four principal areas—interlibrary loan, cataloging, acquisitions, and library management. The studies will develop the rationale of how to automate and the need for regional and national automation centers and their impact. The conference revealed the similarity of goals, techniques, and problems between the national libraries' efforts in the two countries. The directors of both programs will see that activities are coordinated in every appropriate way and that both benefit from full information exchange.
A Systematic Approach to Performance Evaluation of Out-of-Print Book Dealers: The San Fernando Valley State College Experience

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Acquiring out-of-print books has long been a problem for college and university libraries. This article discusses a plan developed by the Acquisitions Department at San Fernando Valley State College for acquiring o.p. books and for evaluating the dealers who supply them. By establishing a dealer's specialization file by subject, a transaction record, and a summary performance evaluation, it is possible to increase appreciably the volume of o.p. titles obtained each year and to purchase them at reasonable prices.

The acquisition of out-of-print material for college and university libraries is a subject of continuing concern to acquisitions librarians throughout the United States. It is difficult, if not impossible, to locate a single o.p. dealer who is willing to search for, and able to supply, books in all subjects at reasonable prices; consequently, librarians are continually attempting to locate specialized dealers and to evaluate their performance. The situation is further complicated by the fact that o.p. problems are not exactly the same in all libraries. The older library, with a well-established collection, seeks out specialized research items that may be relatively scarce, whereas the newer library, which is still establishing its basic collection, will need to acquire books that are more readily available. In reality, pure cases of either type are unusual; most libraries will need a mixture of both kinds of material.

Assuming that the library is building its collection systematically, the acquisitions department will be deluged with requests for specific titles. Under these circumstances the comparison of extensive and ever lengthening want-lists with dealers' catalogs is too costly in staff time to make it worthy of consideration. The same strictures apply to advertising for

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wants in trade publications, since acquisitions would find itself receiving, tallying, and responding to thousands of quotes. This paper will outline a relatively simple approach to large volume, o.p. buying developed at the new, rapidly developing college library at San Fernando Valley State College. The system can be set up by any acquisitions librarian and thereafter handled by an experienced library assistant.

Three control files were established: (1) dealer specialization file by subject; (2) transaction record on dealer activity; and (3) summary performance evaluation of dealers.

Dealer Specialization File

The first step in setting up such a system is the building of a vendor file by subject. This is not as simple as it may sound since there are hundreds of subject areas to be covered and many ways of referring to each. To begin to bring some order into this morass, we used a subject arrangement based on Dewey. The major subject classes were entered, each on a 3x5 index card. Dealers that specialized in these broad category materials were listed on the body of the card. As dealers with more limited subject specialties were located, subdivision index cards were made and the dealers entered thereon.

Dealers and their special interests were collected from AB Bookman and journal advertisements; a dealer’s name was placed on the index card corresponding to the broadest area for which he would search, as well as on the card for each subdivision of that area. Dealers with very limited specialties were listed only on the guide card for that specific area. For example, a dealer whose listed specialty is social science appears on that guide card, as well as all subdivisions: e.g., anthropology, education, and sociology. But a dealer who lists only anthropology appears only on the anthropology card.

For the system to function effectively, a corps of 75–150 dealers must be accumulated as an initial dealer pool. There should be at least two specialists for every subject area of concern to the library, and an optimal number for the initial pool is five for each subject. After a pool of sufficient size has accumulated and been carded, some sort of search request letter must be sent to each dealer.

Our letter asks if the dealer would be willing to search o.p. books in his announced subject specialty and explains certain of our purchasing policies. One stated policy, for example, is that our want-lists are issued on an exclusive basis for one year. Another policy states that a book costing under $35 need not be quoted but may be shipped as a firm sale. The dealer is to reply if he wishes to receive our lists under these conditions; dealers who reply in the affirmative are sent an initial list in their specialty.

Dealer's Transaction Record

Want-lists, which are in effect informal orders, are prepared on a form letter that reiterates our purchasing policies. A formal purchase
order is not prepared until a shipment is received. As wants are supplied from the list, performance statistics are collected for each dealer in order to provide the data needed for evaluation. A second file by dealer's name recording each transaction results.

The form presently in use at San Fernando Valley State College for manual collection of this data is shown in Figure 1.

Dealer name

<table>
<thead>
<tr>
<th>Date</th>
<th>No. of Titles Ordered</th>
<th>Confirming Order No.</th>
<th>Total titles supplied by length of time between order and receipt</th>
<th>Total Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>8/17/69</td>
<td>17</td>
<td>09690510</td>
<td>3mo. 6mo. 9mo. 12mo. 15mo. 18mo.</td>
<td>17.50</td>
</tr>
<tr>
<td></td>
<td></td>
<td>09691812</td>
<td></td>
<td>7.95</td>
</tr>
<tr>
<td></td>
<td></td>
<td>09692350</td>
<td></td>
<td>28.50</td>
</tr>
</tbody>
</table>

Figure 1

Each dealer has one or more cards in the file; as want-lists are issued to him they appear as a date and number of titles in the far left columns. As titles arrive, a confirming order (primarily for our records—the want-list can serve as an order for the dealer) is prepared, an order number is issued, and the number of titles recorded in the proper place on the time grid. The total price appears in the far right column. Sufficient space must be left between entry of each new want-list for recording of the titles as they arrive; if want-lists are large or if the dealer is given to supplying titles one at a time, several cards may be required for each want-list.

Since it is necessary at all times to know how many titles are outstanding with a given dealer, cancellations must also be noted on the statistics card. These cancellations usually occur when we find that a title has been reprinted and the out-of-print copy is no longer needed, or when we receive the item as a gift. The example in Figure 2 illustrates the recording of five cancelled titles. We record them very simply by crossing out the number of outstanding titles and entering a new total reduced by the number of titles cancelled. Once the number supplied reaches the number ordered, or when a year has passed with little activity and the remaining titles are ready for cancellation and reassignment to another dealer, closing of that particular want-list is noted on the card. However, the card itself remains in the file to tell its story when the evaluation is made.

Summary Performance Evaluation of Dealers

After the accumulation of a year’s data, the performance evaluation can be made. (Evaluations can be made at any time, but at least one year, or the period for which the dealers have the want-lists on an exclusive basis, is the minimum time for the first comparison.) The method
for tallying this data is necessarily somewhat detailed. On the worksheet we record the information as shown in Figure 3.

<table>
<thead>
<tr>
<th>Dealer</th>
<th>Total Titles Ordered</th>
<th>Total Titles Supplied</th>
<th>Total titles supplied by length of time between order &amp; receipt</th>
<th>Total Cost</th>
<th>Unit Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>450</td>
<td>156</td>
<td>12  53  29  18  12  37</td>
<td>1982.17</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>23</td>
<td>12</td>
<td>11  0   1   0   0</td>
<td>205.20</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>1,198</td>
<td>116</td>
<td>15  43  55  2   0</td>
<td>1567.75</td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>17</td>
<td>0</td>
<td>0     0   0   0</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

We record every dealer to whom we have sent a list, even if his response has been zero. We record the total number of titles listed with him over the year, and the total received in three months, six months, and so on. Finally, we total the cost of titles supplied by each dealer and enter it on the worksheet. When all of the data have been recorded, we calculate the unit costs and the total percentage of titles supplied for each dealer.
The chart in Figure 4 collects the basic data which are required for performance evaluation. It is essentially a compilation of the year’s activity in o.p. books, arranged by dealer, and showing unit costs and the percentage of titles supplied.

In order to make valid comparisons and decisions on whether or not to retain an individual dealer, dealers should be compared to others within the same specialty where this is possible. Our decisions take the following factors into consideration:

A. Percent supplied:
   Is it large? If not, are there extenuating circumstances, such as low unit cost or specialization in a subject that is difficult to cover and of crucial importance to the library? Perhaps special additional services are provided by the dealer that make it worthwhile to retain him, despite low returns.

B. Percent supplied over a period of time:
   Does everything come in within the first three months, indicating a dealer who supplied from stock and does not bother to search? Does the dealer continue to supply over a period of time, indicating an active searching program?

C. Unit Cost:
   Compared to in-print books on the same subject, is the unit cost high? Does this reflect genuine difficulty in acquiring the material? If not, is this factor balanced by an extraordinarily large percent supplied? Is this subject so hard to cover that high unit costs must be accepted?

D. Other changes over time:
   Is the percent supplied by this dealer declining? Does this seem related to the increasing size of the orders being placed with him? Is it correlated with a rising unit cost? Perhaps fewer orders should be placed with him to maintain performance. Is the dealer changing his subject specialty? If so, we revise our guide card to reflect this change.

E. Subject specialties:
   Does the actual performance of this dealer match the subject specialty he claims, or do his responses reflect a concentration in something different? A review of the confirming orders placed with him will reveal this.

**Foreign Dealer Performance**

Foreign publications are not usually want-listed by subject, but rather by country, group of countries, or by language. An exception to this procedure is made for British publications. Since we purchase a great many British publications and several dealers are available, it becomes worthwhile to divide them as we do domestic publications. A few practical examples might serve better to point out the techniques used in the evaluation of foreign dealer performance (see Figure 5).
SUBJECT: All publications from Spain

<table>
<thead>
<tr>
<th>Dealer</th>
<th>Total Titles Ordered</th>
<th>Total Supplied</th>
<th>% Supplied</th>
<th>3mo. 6mo. 9mo. 12mo. 15mo. 18mo.</th>
<th>Total</th>
<th>Unit Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>132</td>
<td>23</td>
<td>17%</td>
<td>12</td>
<td>11</td>
<td>29.50</td>
</tr>
<tr>
<td>B</td>
<td>64</td>
<td>6</td>
<td>10%</td>
<td>0</td>
<td>4</td>
<td>43.70</td>
</tr>
<tr>
<td>C</td>
<td>226</td>
<td>50</td>
<td>22%</td>
<td>29</td>
<td>6</td>
<td>143.00</td>
</tr>
<tr>
<td>D</td>
<td>49</td>
<td>11</td>
<td>29%</td>
<td>1</td>
<td>3</td>
<td>52.14</td>
</tr>
<tr>
<td>E</td>
<td>92</td>
<td>41</td>
<td>45%</td>
<td>4</td>
<td>19</td>
<td>403.85</td>
</tr>
<tr>
<td>F</td>
<td>148</td>
<td>57</td>
<td>39%</td>
<td>9</td>
<td>14</td>
<td>135.09</td>
</tr>
</tbody>
</table>

Figure 5

It is easy to see that Dealer F shows superior performance and should be the first choice of dealers in this subject. Figures based on eighteen months' experience indicate that he has supplied 39 percent of the titles requested and that his unit cost of $2.37 is the second lowest recorded. He searches steadily and turns up material over a long period of time on a regular basis.

Dealer A has the lowest unit cost but his rate of return is not very high. It appears possible that our lists to him may be fairly recent and that his percentage of return will improve given time. This possibility necessitates a look at the original data sheets to ascertain date of issue for lists to him.

Dealer B has a high unit cost and a low rate of return. He should be kept for use as a last resort.

Dealers C and D have a fairly good rate of return and acceptable unit costs. They should be used on the second and third attempts to obtain material not supplied by Dealer F.

Dealer E has the best return record of all the dealers, but his unit cost is extremely high. Possible explanation should be sought in the nature of the titles he supplied; the actual orders will reveal whether he has been supplying art books, expensive books in other fields, or other material of a nature that justifies the high unit cost. But even if no explanation for the high unit cost can be found in the actual orders, he should not be discarded, but should be kept in reserve to search for those titles that all the other dealers have failed to locate.

The General Search Dealer

There are dealers who do not limit themselves by subject, but who indicate a willingness to search for anything and everything. General dealers are useful for covering subjects for which no specialized dealer has been found, and for those items for which it is difficult to assign a specific subject: books whose titles are general or uninformative, books that cover several subjects, and so on (see Figure 6).

It appears that among the dealers who supply all subjects, Dealer E is a reasonable first choice. His unit cost is slightly higher than the sec-
Dealers A, B, D, and G, who have supplied nothing, also should be checked on the statistics cards. The cards will indicate how long lists have been outstanding to these dealers. If the time period approaches a year, these dealers should be dropped from the pool immediately, particularly in view of the large number of titles placed with them which might be more profitably placed with a dealer who responds. In any case, no further lists should be issued to B and D until they show response to the large number of titles already listed with them.

Better Dealer Decisions Possible

Few decisions concerning the selection of dealers are easy for an acquisitions librarian to make, even after scrutinizing all of the objective evidence. A few dealers will, of course, be exceptionally good or exceptionally bad and pose no problems. The majority will fall somewhere between these extremes, and all factors will have to be considered in the light of the strengths and weaknesses of the evaluating library's collection. What may be desperately needed in one library may be so well covered in another that only the best dealer performance will be tolerated.

This program for evaluating the acquisition of O.P. material provides promising results. It is clear that the method offers some means of measuring the relative usefulness of individual dealers in a given subject grouping. During the period of this study, which is based on the results of eighteen months of operating with these procedures, most titles were placed with only one dealer. (It should be noted that as a part of

Figure 6

<table>
<thead>
<tr>
<th>Dealer</th>
<th>Total Titles Ordered</th>
<th>Supplied 3mo.</th>
<th>Supplied 6mo.</th>
<th>Supplied 9mo.</th>
<th>Supplied 12mo.</th>
<th>Supplied 15mo.</th>
<th>Supplied 18mo.</th>
<th>Total Cost</th>
<th>Unit Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>183</td>
<td>51</td>
<td>28%</td>
<td>11</td>
<td>25</td>
<td>15</td>
<td></td>
<td>472.84</td>
<td>9.27</td>
</tr>
<tr>
<td>B</td>
<td>94</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>C</td>
<td>8</td>
<td>1</td>
<td>13%</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>12.50</td>
<td>12.50</td>
</tr>
<tr>
<td>D</td>
<td>250</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>E</td>
<td>404</td>
<td>124</td>
<td>31%</td>
<td>91</td>
<td></td>
<td>5</td>
<td></td>
<td>2811.00</td>
<td>9.76</td>
</tr>
<tr>
<td>F</td>
<td>13</td>
<td>2</td>
<td>12%</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td>13.50</td>
<td>6.75</td>
</tr>
<tr>
<td>G</td>
<td>16</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>H</td>
<td>947</td>
<td>83</td>
<td>9%</td>
<td>37</td>
<td>31</td>
<td>6</td>
<td>9</td>
<td>1043.39</td>
<td>12.57</td>
</tr>
</tbody>
</table>

ond best performer, Dealer A, but his overall performance is better. His record shows continued searching and considerable success over time. Dealer H, with high unit cost and a very low total percentage supplied, shows a pattern of good supplying over the initial months but a quick decline thereafter. It is quite possible that this pattern is related to the extremely large number of titles outstanding with him; perhaps an initial success has led us to overload a small operation. A study of the original statistics cards should clarify this point.
our o.p. procedures the gathering of statistics is continuous, and evaluations can be made at any time.) The overall return for the first year of operation was 27 percent (of 17,689 titles ordered, 4,720 were received). The average unit cost for the 4,720 titles received was $10.18. When compared with the average unit cost of in-print books (all subjects) of $9.19 for the same time period, the result appears to be quite good.

We believe that this approach to o.p. buying provides a technique for obtaining materials and for evaluating vendor performance that can be adapted to an individual library's needs, and refined as extensively as necessary. The method used to arrive at those results may be applied by any library that feels the need to exercise a closer control over its o.p. acquisitions program.
Telefacsimile at Penn State University:  

W. CARL JACKSON  
Director of Libraries  
Pennsylvania State University

A telefacsimile network links most of the Pennsylvania State University, Commonwealth Campus libraries, which are located throughout the state, with the main library at University Park. These libraries have limited teaching-oriented collections not intended to support individual research. The telefacsimile network enables users of the libraries to have access to the large research collections at University Park. This article discusses the operations of the network for the year 1968-1969, equipment used, problems involved, and costs. It was originally presented at a meeting of the RTSD Telefacsimile Committee at the 1970 ALA Midwinter Meeting in Chicago.

NOW IN ITS FIFTH YEAR OF OPERATION, a telefacsimile network links most of the Pennsylvania State University, Commonwealth Campus libraries with the main library at University Park. The system was considered necessary because of the basic decision of the university libraries to develop and maintain large research collections only at University Park while providing smaller teaching-oriented collections at the Commonwealth Campus libraries. The economic rationale of a telefacsimile system appeared self-evident in view of the decision to limit collections. These campuses are located in all parts of Pennsylvania, and at the present time offer two years instruction toward the baccalaureate degree or a two-year terminal program. Their library collections are directly related to their level of teaching and are not intended to support faculty research or individual student investigation. Prior to the development of the telefacsimile network, which was planned to back up the limited resources of the campus libraries, there was no way to supplement these resources with any kind of speed, although traditional methods of supplying materials were used.

The use of telefacsimile equipment at Penn State began during an initial test period of six months from September 1966 through March 1967. The university provided funds to permit different types of telefacsimile equipment to be tested in a side-by-side comparison. In this original test only the quality of the machines was evaluated. As a result of the test, Magnafax Telecopiers (marketed by Xerox Cor-
poration), which transmit over telephone lines, were chosen for use in the Penn State network. These telexcopiers transmit a standard size document at the rate of one page every six minutes.

During the spring of 1967, telefacsimile equipment was installed at eight campus libraries. In this phase, the use of the equipment was evaluated to see if it was accomplishing its purpose of supplementing the limited library resources of the campus libraries. After these installations proved successful, the telefacsimile network was expanded so that it now includes nineteen of the campus libraries. Although we are still in the process of analyzing the network from a standpoint of cost and effectiveness, this report is the result of an analysis of our operation at the end of the fiscal year 1968–1969.

The campus units are currently serviced by one machine located in Pattee Library at University Park, but each telexcopier can communicate with a unit at any other location. Most of the transmissions from University Park to the campuses are made via a special WATS line; transmissions of relatively short duration may be made from the campuses to University Park over regular telephone lines. However, if it appears that a transmission from a campus will require more than three minutes for its completion, the operator at University Park calls back the campus library through the wide area facility and the transmission is made over this line. Telefacsimile transmission of lengthy sets of material and of material not needed in a hurry is impractical at the present stage of equipment development. However, in cases where there is an urgent need for relatively small quantities of material, current telefacsimile facilities perform an invaluable service.

Somewhat severe limitations were placed upon the use of telefacsimile equipment when the program was first established in order to prevent an overloading of telephone lines and to allow the people servicing the equipment to perform adequately duties which were not related to the telefacsimile operation. The rigidity of these limitations caused only a minimum use to be made of the facilities, and thus during the 1969 fiscal year they were relaxed substantially. As a consequence, and with additional encouragement to use the telefacsimile equipment, there has been a steady increase in its use.

During the first half of the fiscal year, the copying of requested material from periodicals and books and transmission of the copies to the campuses were part of the duties of two clerks who were also deeply involved in the placing and processing of book orders. Approximately midway in the 1969 fiscal year these clerks were relieved of the copying and telefacsimile responsibilities, and these duties were turned over to a new clerk located in the interlibrary loan department. At the outset it seemed that one full-time clerk would be able to handle the part-time duties of the two clerks previously responsible. However, it was found that absences from the full-time clerk's desk for the searching and reproduction of requested materials made telephone contact with her difficult. Thus, a large amount of the campus librarians' and the
Commonwealth Campuses library personnel's time was wasted in attempting to make telephone contacts with the telefacsimile clerk. To correct this, it was necessary to hire two students on a part-time basis to assist the interlibrary loan, telefacsimile clerk. A request was made in the budget for fiscal 1970 for the creation of an additional clerical position to aid with these duties. Approval of this request will help to assure the continuation of telefacsimile and interlibrary loan services not only throughout the school terms, but during term breaks as well.

Many of the new telecopier transceivers were installed for the first time during the first six months of fiscal year 1969. Properly adjusting these machines following their installation frequently consumed periods of several weeks during which transmissions over these units were of a distinctly substandard quality. Also, the installation dates of some of these machines are in doubt, a fact which makes it difficult to determine the exact number of operating units at any given time during the first half of the fiscal period. Therefore, the total transmissions of all units for this period have been used to calculate a single monthly average, and this average has been used as a point of departure in demonstrating the increases in usage during the 1968–1969 fiscal year.

An average of seventy pages was transmitted during each month in the last half of 1968 (the first six months of fiscal year 1969). Telephone line rentals, telecopier rentals (assumed to be for nineteen units), supplies, and personnel costs for this average month total $1,478.69, for a cost per page of $21.12. In January 1969 after changing one Telecopier I unit for a Telecopier II, the cost of transmitting sixty-five pages was $1,491.95, for an average cost of $22.95. An increase to 105 pages transmitted in February raised costs for the month to $1,505.64, for an average cost per page of $14.34. In March the transmissions fell to ninety-two as the costs decreased to $1,501.39. This action raised the average cost for March to $16.32 per page. The substantial increase to 212 pages transmitted in April raised the total cost for the month to $1,655.38, but yielded a decrease in average cost per page to $7.80. In May the transmissions increased still further to 241 pages, cost a total of $1,665.58, and yielded a further reduction in cost per page to $6.91. There was a substantial but not unexpected decrease in June transmissions to a total of fifty-two. They were sent at a total cost of $1,601.89, for an average cost per page of $30.80. The total pages sent during the last half of the fiscal year (the first six months of 1969) was 767. The total six months' cost was $9,420.03, for an average cost of $12.28. An average for the fiscal year has not been presented because of the somewhat stochastic nature of the figures used in the first six months of the fiscal year.

Table 1 shows the actual operational results for the fiscal year 1968–1969 and Table 2 shows the comparative costs at 50 percent and 100 percent utilization with both the WATS line and with unlimited wide area telephone availability. By the end of calendar year 1969 almost unlimited wide area telephone service throughout Pennsylvania was
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Telephone</td>
<td>$509.20</td>
<td>$509.20</td>
<td>$509.20</td>
<td>$509.20</td>
<td>$509.20</td>
<td>$511.25</td>
<td>$513.60</td>
</tr>
<tr>
<td>Telecopier Rentals</td>
<td>945.00</td>
<td>960.00</td>
<td>960.00</td>
<td>960.00</td>
<td>1,070.00</td>
<td>1,070.00</td>
<td>1,070.00</td>
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<td>Supplies</td>
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<td>4.29</td>
<td>3.76</td>
<td>8.67</td>
<td>9.86</td>
<td>2.12</td>
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<td>Personnel</td>
<td>21.63</td>
<td>20.09</td>
<td>32.45</td>
<td>28.43</td>
<td>65.51</td>
<td>74.47</td>
<td>16.07</td>
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<tr>
<td><strong>Total Cost</strong></td>
<td>$1,478.69</td>
<td>$1,491.95</td>
<td>$1,505.94</td>
<td>$1,501.39</td>
<td>$1,653.38</td>
<td>$1,665.58</td>
<td>$1,601.79</td>
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<tr>
<td>Pages Transmitted</td>
<td>70</td>
<td>65</td>
<td>105</td>
<td>92</td>
<td>212</td>
<td>241</td>
<td>52</td>
</tr>
<tr>
<td>Cost per Page</td>
<td>$21.12</td>
<td>$22.95</td>
<td>$14.34</td>
<td>$16.32</td>
<td>$7.80</td>
<td>$6.91</td>
<td>$30.80</td>
</tr>
<tr>
<td></td>
<td>Basic Cost</td>
<td>Fixed Cost Per Page</td>
<td>Monthly Average At Maximum Usage</td>
<td>Monthly Average At 50% Usage</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---------------------------</td>
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<td>---------------------</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>With WATS</td>
<td>With Unlimited Wide Area</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>With WATS</td>
<td>With Unlimited Wide Area</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Telephone</td>
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<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WATS</td>
<td>$500.00/mo.</td>
<td>$—</td>
<td>$500.00</td>
<td>$500.00</td>
<td></td>
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<tr>
<td>Station Set</td>
<td>9.20/mo.</td>
<td>—</td>
<td>9.20</td>
<td>9.20</td>
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<tr>
<td>Satellite Set</td>
<td>1.90/mo.</td>
<td>—</td>
<td>1.90</td>
<td>1.90</td>
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</tr>
<tr>
<td>Card-Dialer</td>
<td>2.50/mo.</td>
<td>—</td>
<td>2.50</td>
<td>2.50</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Telecopier Rentals</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Telecopier I</td>
<td>$50.00/mo.</td>
<td>—</td>
<td>1,235.00</td>
<td>1,235.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Telecopier II</td>
<td>65.00/mo.</td>
<td>—</td>
<td>1,235.00</td>
<td>1,235.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supplies</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Copy Sets</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Average 3 letter, 1 legal)</td>
<td>$7.96/box</td>
<td>.0265</td>
<td>45.92</td>
<td>22.95</td>
<td></td>
<td></td>
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<tr>
<td>Send Carriers</td>
<td>4.42/box</td>
<td>.0144</td>
<td>24.96</td>
<td>12.47</td>
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<tr>
<td>Personnel</td>
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<td></td>
<td></td>
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<tr>
<td>CCL</td>
<td>357.00/mo.</td>
<td>.206</td>
<td>357.00</td>
<td>178.40</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Branch</td>
<td>357.00/mo.*</td>
<td>.103</td>
<td>178.50</td>
<td>89.20</td>
<td></td>
<td></td>
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<tr>
<td>TOTAL COST</td>
<td></td>
<td></td>
<td>$2,354.98</td>
<td>$1,884.98</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>$2,051.62</td>
<td>$1,581.62</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Pages</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transmitted</td>
<td>—</td>
<td>—</td>
<td>1,733</td>
<td>866</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cost per Page</td>
<td>—</td>
<td>—</td>
<td>$1.36</td>
<td>$1.83</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Estimated to require only 50 percent receiving operator's time.
expected to be available to Penn State and to all other Pennsylvania state universities, colleges, and their branches. This wide area service, it is understood, will be subsidized by the state to a degree wherein the individual cost per line to the universities will be negligible. We have compared the estimated costs of using the telefacsimile equipment with the unlimited wide area service to the cost of using it with the current WATS line which bears a monthly rental of $500. The comparison has been made at two levels of operations. The first assumes a full eight hours' use per working day of the telecopier unit located in the Commonwealth Campuses library office; it is immaterial whether the machine's use is as a transmitter or as a receiver. At this level it is assumed that a total of ten pages can be transmitted (or received) per hour for a total of 1,733 pages per month. Excluding the possibility of concurrent campus-to-campus transmissions over regular telephone lines, this level of operation represents the maximum that can be obtained under the most optimum conditions, and also represents complete utilization of the telecopier and wide area telephone equipment during normal working hours. A differentiation is made between the costs under these conditions using the present WATS line with its rental charge of $500 per month, and using the anticipated unlimited wide area facilities presumed to be available by the end of this year. Using the current WATS line, the cost per page transmitted totals $1.36, while with the unlimited wide area facilities this cost falls to $1.07.

The second level of operations has assumed a usage of 50 percent of maximum level. Under these conditions the cost with the WATS line is $2.37 per page, while with the unlimited wide area facilities it is $1.79. The figures representing 50 percent utilization of the telefacsimile facilities seem at present to be the most realistic assessment of future maximum activity. Even this level would make it highly desirable either to employ lower-priced operators to perform machine duties, or to make use of whatever mechanical feeding and receiving attachments might become available.
A Shelflist Conversion for Multi-Library Uses

EDWARD JOHN KAZLAUSKAS
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Graduate School of Library Science
University of Southern California
Los Angeles, California

This article describes the conversion of catalog records to machine-readable form. The Library of Congress card and classification numbers, author entry, title entry, and serial record indicators were key-punched from the shelflist to create the file. Why each of these elements was used is discussed. The conversion system is outlined. Conversion costs and actual and contemplated results are listed.

Background

SAN FERNANDO VALLEY STATE COLLEGE is one of the newer and more rapidly growing California State Colleges with a student body of approximately 23,000 students and a library housing 360,000 volumes, to which 60,000 volumes are added each year. In 1967 a systems group was established to apply data processing techniques to library procedures. Campus computing facilities included a GE-225 and a GE-435. The GE-435 was equipped with a DATAnet 30, thus allowing remote access.

A number of library automation projects were studied, planned, and implemented. Although these projects provided specific limited results, it soon became evident that total library automation could not occur without conversion of the library's main or basic file, the shelflist, into machine-readable form. Conversion of the shelflist would form the basis for automation activities in the three major technical services areas: acquisitions, cataloging, and serials, as well as in the public services areas: circulation and reference.

Basic Considerations

It became apparent that owing to budgetary and personnel limitations, full bibliographic information could not be converted to machine-readable form on our campus. Also at this time, developments at the Library of Congress held promise that full bibliographic data conversion would be available through Project MARC, and that retrospec-
tive conversion would be available later. Therefore, it was decided to create a data base with limited bibliographic information which could still be used for a variety of results; one which could form the basis for future automation and could later utilize full bibliographic data developed by other sources. With the foregoing points in mind, the systems group turned to conversion of a limited shelflist. We decided that the following elements were essential to meet our needs: LC card number, LC classification number, main entry (shortened), title (shortened), and serial record indicators.

The LC card number is a number which presently exists on our shelflist and on the MARC records. It is a number which is readily used and identified by our library staff. The LC card number could be the key to the author/title record, and could be used as the key to the exchange of machine-readable data. The number could also be used in some of the sorting and processing routines since sorting numerics is easier than alpha-numeric. The LC card number is carried as an eleven-character field, which allows for three leading alpha or numeric characters and eight numerics. Our library assigns similar numbers to non-LC numbered items with the following identifying prefix format: CNS (California. Northridge. State.). A record is kept of the assigned numbers so that any unique numbers assigned by the Library of Congress can be used later to update the file.

The LC classification number keys directly to our master inventory record, the shelflist, without creating a need to consult intermediate records, and it enables us to tell various things about the item itself from the class number, which could not be deduced from an arbitrary designation. The number already exists on and in our circulating and most of our noncirculating materials. In checking the shelflist, we determined that thirty-six characters would adequately support the classification number. The results of our conversion showed that our estimates were correct, and we only exceeded our thirty-six-character limit three times. Four additional spaces were used for LC classification prefixes, such as F (folio), REF (reference), FREF (folio-reference), and J (juvenile). Holdings information was taken directly from the shelflist cards and incorporated into the LC classification number as marked on the physical volume.

Example: ML410.S4B86V.5C.2
QA76.5.K451963C.6

Our investigation of the main entry and title data determined that our first consideration should be the identification of material for easy interpretation by students, faculty members, and library staff members. A second consideration was the ease of input by keypunch operators. We decided against abbreviations which could cause confusion. Most author and title records could be easily incorporated into one card each, and in most cases, much less. We limited ourselves to one card for main entry and one card for title, each having a field of fifty-four characters. We
also allowed space for the repetition of certain data, the LC card num-
ber, and certain codes.

Specific rules were established for punching entries. It must be re-
membered, however, that the majority of entries could be placed into
the fifty-four spaces allotted for both main entry and title.

1. General rules:
   a. Use no abbreviations other than those established by Library of
      Congress.
   b. Ignore diacritical marks.
   c. Punch non-Roman alphabets in their transliterated form.

2. Punching the main entry:
   a. Omit dates and information following the author's name, with
      the exception of personal titles.

3. Punching a corporate entry:
   a. Include all of the corporate entry that is possible to include in
      the fifty-four spaces without ending with an incomplete word.
   b. When punching a corporate entry, use no abbreviation except
      those established by the Library of Congress; use no ellipsis ex-
      cept as outlined for symposiums, conferences, etc., which re-
      peat information from the entry in the title.

4. Punching a symposium, conference, etc.:
   a. Omit information from the main entry and the title indicating
      the omission by ellipsis so as to more adequately describe the
      material. City and date are important elements.

5. Punching the title entry:
   a. The title should always be stopped at the first period if there
      is no other internal punctuation which indicates that a stop
      could be made.
   b. The title should always be stopped at the first semicolon.
   c. The title may be stopped at a comma unless the comma indi-
      cates words in a series or sets off a date, place, or name which
      is meant to be part of the title.
   d. The title may be stopped at a colon unless the words to the co-
      lon do not make sense or describe the contents of the book.

In order to furnish serial holdings which are not indicated on our
shelflist, it was necessary to identify serials in some way so that the hold-
ings could be obtained from our separate serial record file. Serial iden-
tification was done by coding the input cards, which were later sorted out
and taken to the serials department for holdings. The code is trans-
ferred to the tape record when the data are submitted to tape and can
be used to identify all serial items in the shelflist.

Our shelflist is typical of library shelflists. It is a catalog of books
arranged by LC classification number and is the official working record
of the catalog department. Library holdings, with the exception of the
serials record items, are shown on the shelflist cards, which also indicate
those items which have been reported missing or withdrawn. We have separate shelflists for music scores and juvenile books, which were converted. When we started, the main shelflist file contained approximately 300,000 volumes, or 200,000 title records. All records in the shelflist, with the exception of micromaterials, periodicals, and special collection materials, were converted. These special materials will be converted at a later date.

**System**

While several methods of producing machine-readable records were possible, local keypunching under our own supervision was selected. Such alternate methods as optical scanning and contract conversion were investigated and considered, but the deciding factor in our decision was the immediate availability of two keypunch machines offered to us by our computer center.

To facilitate proofing, the IBM records of the converted shelflist were listed in a format suitable for checking. These listings showed typing errors and produced numerous error diagnostics designed to maintain format and correct tape records, such as below:

- "LC card number from the author record does not match that of the title record."
- "Error of the second kind in the LC classification number. Character after the leading letters cannot be identified as numeric."
- "Error of the thirteenth kind in the LC classification number. No numerics after the first author initial."

The listings that were produced were proofed against the actual shelflist cards. Errors were marked on the punched cards, and the cards were corrected. All additions to the shelflist (new items, added volumes, and copies of serials and monographs) were keypunched, proofed, and corrected in a similar manner, and are used to update bibliographic files.

The keypunched cards for the proofed section of the shelflist and currently added materials were used to create the bibliographic file. Original versions of the program were written in COBOL for the GE-445 using a tape operating system. This has recently been revised to operate under a disk system. The logical record length of the seven-level 800 bpi bibliographic tapes is 284 characters with seven records to a block.

We sequenced these bibliographic files by the LC classification number, the same sequence as the shelflist. Sorts were available for LC card number sequencing, and LC card number prefix sequencing. This decision to use the LC classification number made us solve the traditional problem of machine-sorting the LC classification. This field could not be filed letter by letter, since it contains a mixture of alpha, numeric, and decimal characters. To solve this problem, a program expands this field to a maximum of fifty-six characters, and places these characters into fourteen distinct fields.
CLASSIFICATION NUMBER EXPANSION

<table>
<thead>
<tr>
<th>Field Number</th>
<th>Character Designation</th>
<th>Maximum Characters</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>alpha</td>
<td>3</td>
</tr>
<tr>
<td>2</td>
<td>numeric</td>
<td>4</td>
</tr>
<tr>
<td>3</td>
<td>period</td>
<td>1</td>
</tr>
<tr>
<td>4</td>
<td>numeric</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>numeric</td>
<td>4</td>
</tr>
<tr>
<td>6</td>
<td>special</td>
<td>1</td>
</tr>
<tr>
<td>7</td>
<td>numeric</td>
<td>2</td>
</tr>
<tr>
<td>8</td>
<td>numeric</td>
<td>2</td>
</tr>
<tr>
<td>9</td>
<td>period</td>
<td>1</td>
</tr>
<tr>
<td>10</td>
<td>alpha</td>
<td>1</td>
</tr>
<tr>
<td>11</td>
<td>numeric</td>
<td>4</td>
</tr>
<tr>
<td>12</td>
<td>alpha</td>
<td>1</td>
</tr>
<tr>
<td>13</td>
<td>numeric</td>
<td>4</td>
</tr>
<tr>
<td>14</td>
<td>alpha-numeric</td>
<td>24</td>
</tr>
</tbody>
</table>

Examples:

Class:
HA201.B24
Expanded Class:
0HA201.000000000000.B00240000000000000000000000000000

Class:
HA201.1439.B24V.1
Expanded Class:
0HA201.1439000000000.B002400000V.1000000000000000000000

Class:
HA201936.B86V.1C.3
Expanded class:
0HA201.0000193600000.B008600000V.1C.3000000000000000000

Data Record Layout

1-11 LC card number
12 done (book card punched)
13-15 LC classification prefix
16-71 LC classification number expanded
72-107 LC classification number
108 serial record code
109-124 filler
125-134 LC card number
135 card code
136-189 main entry
190-204 filler
205-214 LC card number
215 card code
216-269 title
270-284 filler

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## Card Description Form

**Figure 1**

<table>
<thead>
<tr>
<th>Name of Field</th>
<th>Columns From</th>
<th>Columns To</th>
<th>Number Columns</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>card #1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1-LC card prefix</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>2-LC card yr./code</td>
<td>4</td>
<td>5</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>2-LC card accession</td>
<td>6</td>
<td>11</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>3-card code</td>
<td>12</td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>4-LC class prefix</td>
<td>13</td>
<td>16</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>5-LC class number</td>
<td>17</td>
<td>52</td>
<td>36</td>
<td></td>
</tr>
<tr>
<td>6-skip</td>
<td>53</td>
<td>66</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>7-book card code</td>
<td>67</td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>8-multivol./copy code</td>
<td>68</td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>9-serial record code</td>
<td>69</td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>10-skip</td>
<td>70</td>
<td>80</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>card #2, 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1-LC card prefix</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>2-LC card yr./code</td>
<td>4</td>
<td>5</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>2-LC card accession</td>
<td>6</td>
<td>11</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>3-card code</td>
<td>12</td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>4-author/title</td>
<td>13</td>
<td>66</td>
<td>54</td>
<td>author on #2 card; title on #3</td>
</tr>
<tr>
<td>5-book card code</td>
<td>67</td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>6-multivol./copy code</td>
<td>68</td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>7-serial record code</td>
<td>69</td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>8-skip</td>
<td>70</td>
<td>80</td>
<td>11</td>
<td></td>
</tr>
</tbody>
</table>

*Library Resources & Technical Services*
After one and a half years, we had our basic file in machine-readable form and had a method of keeping this file up-to-date for additions, deletions, and corrections. New shelflist cards are forwarded to the systems group before they are filed. These records are punched and used to update the file for new acquisitions. The systems group also receives notice of withdrawals. The records of the withdrawals are used to delete the record from the tape file. Items involving minor changes come through as withdrawals and then as new items to be added to the file.

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Figure 3
Costs

Steps involved in conversion (based on actual cost for completing conversion of over 300,000 items).

1. Keyboarding
   397 titles per man-day or
   596 volumes per man-day
   @ $22.00 per day for keypunch operator
   $0.0554 per title

2. Visual Proofing
   516 titles per man-day or
   775 volumes per man-day
   @ $13.20 per day for student assistant proofer
   $0.0256 per title

3. Correction Keyboarding
   Based on 5 percent overall error rate.
   Correction rate of 1½ boxes per man-day
   @ $13.20 per day for student assistant corrector
   $0.0044 per title

4. Supervision (half-time position)
   for 1½ years
   @ $22.00 per day
   $0.0203 per title

5. Supplies
   750,000 cards @ $.92 M
   $0.0035 per title

6. Equipment
   rental of 2 IBM 026 Keypunches for 1 year and
   1 IBM 026 for ½ year
   $0.0070 per title

   Our Total Conversion Cost
   $0.1162 per title

Results and Conclusions

The first result of the conversion was the availability of book information for a circulation system. A program extracted LC card and LC classification information and punched individual book cards. The book cards were taken to the stacks and individually compared with the corresponding physical volume. If the card and book corresponded exactly, the book card was placed in the book. The book-carding brought about a natural inventory of our collection, with the additional result of pointing out errors in our shelflist, in book-marking, on the serial record, and on tape bibliographic files. Items supposedly withdrawn were located and had to be reinstated or destroyed; books marked differently had to be corrected; and missing items had to be replaced or the records withdrawn. Also, the machine-readable book cards were now in the books available to be used in an automated circulation system (inaugurated April 1970 using BroDart Kompunch input devices).

New book lists in LC classification number order are created monthly, and copies are distributed to the reference department and subject
<table>
<thead>
<tr>
<th>LC CARD NO.</th>
<th>LC CLASSIFICATION</th>
<th>AUTHOR AND TITLE</th>
</tr>
</thead>
</table>
| 56-059098 1 | ML161.C743PT.1a | COLLES, HENRY COPE  
THE GROWTH OF MUSIC |
| 56-059098 1 | ML161.C743PT.2a | GAFFURI, FRANCHINO  
PRACTICA MUSICAEX |
| 56-059098 1 | ML161.C743PT.3a | SAVAS, SAVAS  
BYZANTINE MUSIC IN THEORY AND IN PRACTICE |
| 66-049280 1 | ML188.S29a | DEIT, OTTO  
EXPLORING TWENTIETH-CENTURY MUSIC |
| 66-018408 1 | ML197.D39a | KOVACEVIC, DRESIMIR  
THE HISTORY OF CROATIAN MUSIC OF THE TWENTIETH CENT. |
| 68-112199 1 | ML263.C76K683a | FAST, JULIUS  
THE BEATLES |
| 68-055025 1 | ML286.5.F38a | WARWICK, ALAN ROSS  
A NOISE OF MUSIC |
| 68-116276 1 | ML286.8.L5437a | RUCHET, EDMOND EDOUARD  
JEAN-SEBASTIEN BACH APRES DEUX SIECLE D'ETUDES,.. |
| 67-110474 1 | ML410.B19748a | BOYD, MALCOLM  
HARMONIZING 'PACH' CHORALEX |
| 67-016875 1 | ML410.B13063a | THOMPSON, OSCAR  
DEBUSSY |
| 39-027304 1 | ML410.G9J62a | JOHNSEN, DAVID MONRAD  
EDWARD GRIEG, BY DAVID MONRAD-JOHANSEN |

Figure 4
New Book List
Figure 5

SHELFLIST PRINTOUT
bibliographers who use them when discussing current acquisitions in a particular field. The bibliographers have also used the shelflist printouts in conjunction with bibliographic surveys and in conjunction with visits of accreditation teams.

Other projects using the converted shelflist file are now in the planning stages, and they include the following:

**Cataloging**
1. Monthly statistics that are produced from the computer.
2. Basis for completing full bibliographic computer-based file.
3. Duplication of the shelflist for other locations.

**Acquisitions**
1. Searching of our holdings (manually or by machine) by LC card number rather than other methods (main entry or title).
2. Basis for an acquisitions system.
3. New book lists in various other sequences other than just classification sequence.

**Serials**
1. A serials record holdings list.

An overall implementation schedule for the above projects is being decided. Our library now has the basis for a total automated library system using a converted data base. The cost to achieve this data base, in view of the possible results, was reasonable.

**REFERENCES**

Handling Changes in Superintendent of Documents Classification

ROBERT M. SIMMONS
Documents Librarian
James P. Adams Library
Rhode Island College, Providence

Documents librarians were recently informed of a significant modification in Superintendent of Documents classification. The notations for all FS classes were changed to HE. In addition, new number designations were assigned to Public Health Service publications. The magnitude of these revisions makes it imperative for documents librarians to develop suitable methods for dealing with this problem. The most satisfactory procedure for handling changes is the complete reclassification of old and new publications to conform with newly assigned notations. This method insures that the publications for each agency will be located together on the shelves and that closely connected series will not be split.

Most persons knowledgeable enough to express an opinion on the subject will agree that the greatest disadvantage of the Superintendent of Documents classification system is the necessity for frequent notation changes. Superintendent of Documents classification arranges the publications of the United States Government by issuing agency. Consequently, administrative reorganization in the federal government results in a corresponding reorganization of the Superintendent of Documents classification scheme. This would not be a major problem if the federal bureaucracy did not resemble a child's kaleidoscope in its ability to continually rearrange itself into an infinite variety of patterns. Since constant upheaval is a fact of life for librarians using Superintendent of Documents classification, they should clearly understand the implications of notation changes, and they should develop suitable procedures for dealing with them.

Depository libraries are informed of classification changes through the laconic notes appearing on the Daily Depository Shipping Lists. Other libraries will find this information listed in the “New Classification Numbers” section of the Monthly Catalog. A typical relocation occurs when an agency of the government is transferred from one administrative unit to another. Shifts may be made from one department to
another, or they may be made within a department. In either case, a new classification notation is assigned to the publications of the agency involved. For example, when the United States Coast Guard was transferred from the Department of the Treasury to the Department of Transportation in 1966, its notation was changed from T47. to TD5. Similarly, when the President’s Committee on Employment of the Handicapped was moved from the Department of Labor to the Executive Office of the President, its letter notation was changed from L to PrEx. One comforting factor is that notification of classification changes is made piecemeal as each specific title is issued, so that the required adjustments can likewise be made gradually.

Documents librarians were recently informed of a significant modification in the Superintendent of Documents classification system. Daily Depository Shipping List 5893, dated December 18, 1969, bore the underlined message, “Due to the necessity for clarification within our office we are in the process of changing all FS classes. The new designation will be HE.” The notation FS refers to the Federal Security Agency, which was superseded by the Department of Health, Education, and Welfare in 1953. For some unexplained reason, the old designation had been left intact during the intervening years. Although this change was long overdue, it was a traumatic event for documents librarians with large holdings in FS. In its terse, two-sentence notice, the Division of Public Documents relocated a major unit of the Superintendent of Documents classification. In some cases the alteration involved merely the letter notation. The designation for the Office of Education, International Education Series, for example, was changed from FS5.214: to HE5.214:. Even more complicated was the reorganization of the Public Health Service which required alteration of letters and numbers. The series Vital Statistics of the United States was changed from FS 2.112: to HE 20.2212:. The scale and complexity of the problems created by the shift from FS to HE further emphasize the need for librarians to give serious attention to the issue of documents reclassification.

In any case, documents librarians cannot ignore classification changes, (much to the regret of many of them no doubt). When the inevitable relocations occur, decisions must be made on the correct technique for handling them. The following three points summarize the possible methods for dealing with classification changes:
1. Continuing to assign old notations.
2. Assigning new notations to publications issued after the change; leaving old notations on material issued before the change.
3. Assigning new notations to publications issued after the change; reclassifying older publications.

The first method, continuing to assign old notations, is impractical for several reasons. One result would be to limit the usefulness of printed bibliographic apparatus. The Monthly Catalog and other lists provided by the Government Printing Office include the Superintendent of Documents classification with their entries. These lists would no longer
serve as location devices for new material. Another objection to this method is that it would require notations to be invented for series which come into existence after the change. Following the conversion from FS to HE, the Public Health Service added numerous new titles to its list. Libraries retaining the FS would have to fabricate designations for each of these new titles. This defeats one major advantage of Superintendent of Documents classification, which is that publications arrive with prefixed notations. Finally, the intention of Superintendent of Documents classification is to conform to the structure of the federal government. The retention of old notations would transform documents collections into esoteric memorials to extinct administrative relationships. Familiarity with current bureaucratic arrangements would be of little assistance in locating publications.

The second alternative, assigning new notations only to those publications issued after the change, has the obvious disadvantage of dividing the publications of the transferred agency. If this technique were used for the United States Coast Guard, its publications would occupy at least three different shelf locations due to the various shifts it has undergone. Similarly, the publications of the Department of Health, Education, and Welfare would occupy two separate locations. This method is further complicated by the fact that most government publications are issued as parts of series. These range from loosely connected groupings with the standard lead title General Publications of . . ., to more closely related sets, periodicals, and other repeating titles. Using the above process, the periodical Welfare in Review would occupy three separate locations (FS14.10:, FS17.9:, and HE17.9:). The disadvantages of bisecting agencies and splitting sets need no further elaboration except to point out that the purpose of classification is to bring like things together. In spite of the handicaps of splitting, many libraries may use this method for reasons of expediency, or as a temporary arrangement until time permits full reclassification of older publications. The inconvenience of splitting can be lessened through reverse "see also" cross-references in documents records and on dummies placed on the shelves.

The third possibility, complete reclassification of old and new publications to conform with notation changes, should be the ultimate goal of documents librarians. Admittedly, there are some pitfalls to this method. First, it may not always be practical to reclassify titles which have ceased publication before a transfer occurs, depending upon the nature of the change. Second, notations reassigned to older publications will not correspond to those listed in earlier editions of the Monthly Catalog. This inconvenience can be diminished through the use of "see" references from old to new notations. The advantages of complete reclassification, however, are more important than the disadvantages. This practice makes the classification structure more faithful to government structure. Also, the publications of each agency will be placed together on the shelves, and closely related sets will not be severed. Since the major result will be to keep like things together, this method insures that

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the Superintendent of Documents classification system is used to its maximum effectiveness.

The procedure for reclassifying government documents, briefly described, consists of the following steps:

1. Assemble the item card, shelflist card (and any other records), and all issues of the title involved.
2. Correct the notation on all records either by editing old cards or by making out new cards.
3. Make "see" references from old to new notations.
4. Correct notations appearing on all issues of the title.
5. Refile corrected records and reshelve reclassified volumes in their new locations.

Even the most efficient documents librarians may have trouble keeping pace with large scale reclassification projects such as the conversion from FS to HE. If reclassification of some titles must be delayed, first priority should be given to periodicals and other closely related sets. Loosely connected series can be temporarily linked with the reverse cross-references mentioned earlier, until time permits their reclassification also. Opponents of full reclassification may point out the great amount of time and work required to complete this process. Libraries committed to the use of Superintendent of Documents classification, however, should recognize the fact that constant change is an inherent feature of the system, and that reclassification is a legitimate and routine function of the documents librarian.
The Acquisitions Section Executive Committee and the Reproduction of Library Materials Section Executive Committee recommend the following changes in their respective Section’s bylaws. Each member should study these proposed changes. They will be voted upon at the regular meetings of the Sections during the ALA Annual Conference in Dallas in June 1971. Proposed changes in bylaws:

ACQUISITIONS SECTION

Article X. Discussion Groups

Sec. 1. Establishment. Any group of ten or more members of the Section interested in discussing common problems which fall within the object of the Section may form a discussion group upon written petition from the group, and upon approval of the Executive Committee. The petition shall include the purpose of the group and the requirements for membership, if any.

Sec. 2. Membership. Membership is open to members of the Section who are interested in the purpose of the group and who fulfill the requirements for membership in the group.

Sec. 3. Officers. Each group shall elect a chairman annually. In addition to his regular duties, the chairman shall see that the group’s activities are limited to discussion of matters of common interest and concern in accord with the purpose of the group, that the group engages in no activity in conflict with the program of the Section, and that the Section Bylaws are observed by the group.

Sec. 4. Discontinuance. Each group shall continue in existence until its usefulness has ceased when it shall be dissolved by action of the Executive Committee.

Change in numbering of Article X to XI, XI to XII, and XII to XIII.

REPRODUCTION OF LIBRARY MATERIALS SECTION

Article X. Discussion Groups

Sec. 1. Establishment. Any group of ten or more members of the Section interested in discussing common problems which fall within the object of the Section may form a discussion group upon written petition from the group, and upon approval of the Executive Committee. The petition shall include the purpose of the group and the requirements for membership, if any.
Sec. 2. **Membership.** Membership is open to members of the Section who are interested in the purpose of the group and who fulfill the requirements for membership in the group.

Sec. 3. **Officers.** Each group shall elect a chairman annually. In addition to his regular duties, the chairman shall see that the group's activities are limited to discussion of matters of common interest and concern in accord with the purpose of the group, that the group engages in no activity in conflict with the program of the Section, and that the Section Bylaws are observed by the group.

Sec. 4. **Discontinuance.** Each group shall continue in existence until its usefulness has ceased when it shall be dissolved by action of the Executive Committee.

Change in numbering of Article X to XI, XI to XII, and XII to XIII.

IN THE MAIL: DIVIDED CATALOG vs DICTIONARY CATALOG

I neither wholly agree or disagree with James Wilson McGregor's "In Defense of the Dictionary Catalog" (LRTS 15:28–33, Winter 1971), but I should like to comment from the point of view of one kind of library seldom represented when the more arcane philosophy of such questions as "to divide versus not to divide" arise.

Harper Hospital Library, while small by academic or public library standards, is a large hospital professional library containing roughly 6,500 individual book titles. As the hospital is an integral part of the Detroit Medical Center, however, we might be called a part of the library system comprised of the Shiffman Medical Library (of Wayne State University), and the libraries of Children's Hospital of Michigan, Grace Hospital, Harper Hospital, Hutzel Hospital, Lafayette Clinic (psychiatric), and Rehabilitation Institute of Michigan. We share the same patrons, since those practicing, teaching, and being trained in medical and medical-affiliated fields rotate between the teaching and research situation of Wayne and the clinical situation of an institution caring directly for patients. In addition, each clinical institution carries on formal instruction programs for people who need training to perform their hospital jobs adequately but for whom no community educational resource exists, e.g., operating room technicians, housekeeping personnel, nurse aides, etc. I write this detailed introduction only to indicate the diversity of demands this library meets.

As recently as 1969 we completed reclassifying this collection (to LC) so that all our "wanderers" would meet book collections with at least a similarity in book arrangement and, at that time took the opportunity to divide our catalog. I think I remember the pre-1969 situation and have settled into the post-1969 one well enough that I can comment fairly on "divided vs non-divided" where the typical library patron may be either highly sophisticated or barely literate.

What we divided into was subject and "name" catalog, following Index Medicus practice current through 1967. Our "name" catalog includes any name having to do with the book, be it the name of the book (title), name of the author, name of sponsoring organization, name of person being written about, or what have you. The name catalog is one and one-half times as large as the subject catalog (a proportion which seems to remain fairly constant). We find the distinction between the parts of the catalog not only easy to explain to our diverse clientele, but also easy for them to remember.

The majority of our readers are relatively sophisticated; they are usually looking for some specific book and are heavy users of the physically larger name catalog. Our subject catalog users are often those less familiar with medical subjects who need both narrow and broad subject approaches. The smaller catalog does not confuse them—except occasionally because of subheadings. I admit we cheat when subject cataloging and use both most specific and more general headings, i.e., both "Tube feeding" and "Intubation, gastrointestinal," but that is because our subject authority, Medical Subject Headings (MeSH), designed both for indexing medical journal articles and subject cataloging books, is often too specific for any but the expert—and not every expert is expert in everything.

Our purpose in dividing the catalog was to achieve more and simpler use of the catalog and, for several reasons, I think we have accomplished it.

(1) The larger part of the catalog serves the more numerous class of patron.
(2) The patron knows that any entry which would require capitalization in normal English practice is in the “name” section.

(3) The subject user is not required to distinguish between title or short title entries and exactly similar subject entries simply by capitalization practice. Moreover, he doesn’t have to plow through many name entries to find the subject.

(4) The library staff, especially the clerical staff, which has an expectable turnover, finds the rules simple to distinguish, follow, and explain.

As usual, the decision depends on the situation.

I hope this comment adds another dimension to the “divide or not divide” controversy rather than merely being “how-we-do-it-at-our-house.”—(Mrs.) Barbara Coe Johnson, Director of Libraries, Harper Hospital, Detroit, Michigan.

**IN THE MAIL: CIP PLUS JCIP**

Among the problems anticipated in the Winter 1971 issue by William J. Welsh for the revival of Cataloging in Publication (CIP) was the “lack of information that appears on dust jackets (frequently providing useful information about the author and the subject of the book).”

I have long wondered at the economically and intellectually wasteful ephemeralness of book jackets, expensively produced, detailing the author’s life and career and conveniently summarizing present and earlier titles. Academic librarians usually remove the jackets, often having frantically consulted the copy to identify the author for reassignment from LC PZ to LC national literature subclasses. (Fortunately, LC now supplies such alternatives for new works.) Sometimes even series identification is found only on the wrapper.

Public and school librarians retain the jackets as long as possible, an admirable merchandising technique, but eventually the book or wrapper is discarded. Some librarians, mindful of their readers advisory duties, have resorted to pasting relevant portions of the jacket into the book.

Would it not be desirable to mount a lesser crusade, at a respectful distance behind the CIP warriors, for JCIP or Jacket Copy in Publication? What a refreshing departure from our usual American wastefulness to “recycle” the jacket text so that it would also appear somewhere in the book: on the verso of the title page, among the preliminary pages, or in colophon position. Indeed, it is not unknown for some publishers to have printed a promotional description in the preliminary pages of their trade books.

With JCIP the librarian would have a permanent reference source, and the reader an annotated collection among which to browse, study, and select. The prospect of such permanency might influence cooperating publishers to heighten the informativeness of their blurbs.

And finally—an ultimate heresy—are dust jackets really necessary? Phonodisc jackets and paperback covers have taken over the field, anyhow. For the publisher of an art book to reproduce in different color values on the jacket an illustration also appearing in the text would seem indiscreet, at least. And why should the retail value of new hardcover books be jeopardized by lost or damaged paper wrappers? Book designers might be stimulated to improve their own and our bibliopegic taste by providing attractive yet commercially persuasive hard covers uncamouflaged by gaudy integuments. Perhaps ecologists also would join the JCIP crusade and help save our trees.—Richard J. Hyman, Assistant Professor, Library Science Department, Queens College, Flushing, New York.

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IN THE MAIL: THE BIBLIOGRAPHER'S CAMERA

I was very interested in the article on “The Bibliographer’s Camera at Arizona State University Library” in the Summer 1970 issue of LRTS, but also a little surprised that the authors had not mentioned the “Copylarger” camera of J. T. Newcomb of the State University of New York at Binghamton. This was designed to copy from the National Union Catalogue. The authors compare the Arizona camera to the Polaroid CU5 camera, but their article would have been more useful if they had been able to comment on the “Copylarger” too.

We bought the “Copylarger” to copy instantly any small entry in a catalog or abstract journal and found that for the NUC the X2 enlargement is excellent, but not necessary for “normal” print. So we modified the camera to copy at 1:1. The process is simple, using photographic paper in a standard 4 × 5 inch cut film holder (2 pieces in each holder), and development is a matter of seconds through a roller processing unit. No film has to be developed and printed first.

More details are given in the article in Microdoc 6:70–72 (1967). I recommend anyone interested in this sort of facility to check on this little camera before reaching a final decision.—L. L. Ardern, Deputy Librarian, The Andersonian Library, University of Strathclyde, Glasgow, Scotland.

NEW PARTS OF THE UNIVERSAL DECIMAL CLASSIFICATION

Two new sections have been added to British Standards Institution’s English Full Edition of the Universal Decimal Classification (UDC). An alphabetical subject index is included in each of these sections.

BS 1000 (616) Pathology covers in its principal divisions the circulation, respiratory system, digestive system, haemopoietic organs, dermatology, genito-urinary system, locomotive organs, neurology, and infectious diseases. In the special auxiliary schedules it covers the concepts of general pathology, circulatory, nervous, functional, and metabolic disorders.

BS 1000 (655) Graphic industries. Printing. Publishing. Book trade deals with the history and antecedents of printing; processes such as the production of printing surfaces (letterpress, intaglio, lithographic, stencil, and screen); typographic design; presswork and machine finishing processes; and all aspects of publishing and bookselling. It does not, however, provide for the mechanical details of the machinery and equipment, which are dealt with in another section, UDC 681.6 (to be published separately).

These publications may be obtained from the British Standards Institution Sales Branch, 101 Pentonville Road, London N1 9ND, priced as follows: BS 1000 (616) 65s; and BS 1000 (655) 19s (60s and 16s respectively to subscribers). Remittance with order for nonsubscribers.
The following abstracts are based on those prepared by the Clearinghouse for Library and Information Sciences of the Educational Resources Information Center (ERIC/CLIS).

Documents with an EDRS price are available in the format specified—microfiche (MF) or hard copy (HC)—from:

ERIC Document Reproduction Service,
LEASCO Information Products, Inc.
4827 Rugby Avenue
Bethesda, Maryland 20014

Payment must accompany orders totaling less than $5.00. For orders less than $3.00, add $0.50 for handling.

Documents available from the National Technical Information Service, Springfield, Virginia 22151 (formerly Clearinghouse for Scientific and Technical Information) have PB number and price.


Institution (Source): George Washington University, Washington, D.C. Biological Sciences Communication Project.

One hundred and eighty-eight selected special libraries were surveyed in an initial attempt to study the resources and major subject holdings available in U.S. federal libraries maintaining extensive or unique collections of research materials. The objectives were twofold: (1) to determine the nature and availability of the various collections and (2) to provide access to subject coverage through both alphabetical listing and a class arrangement. Computer-prepared tables which identify the libraries involved and which interpret and compare in hierarchical arrangement the data obtained in a systematic fashion are presented. An alphabetical list of the subjects reported by and available in the libraries studied is also provided. The subject coverage was widespread; however, there is a noticeable concentration in history and the pure sciences. Religion was represented the least. The definitions of exhaustive and research collections used in the study were insufficient to enable librarians to do more than report the status of their collections based on their own evaluation and interpretation. A study or critique on the feasibility of developing criteria for evaluating research collections is mandatory. Another edition of resources of federal libraries could then incorporate additions, omissions, and corrections, and most important, report the status of collections in a more meaningful manner.


Institution (Source): George Washington University, Washington, D.C., Biological Sciences Communication Project.

An effort to determine the feasibility of formulating a series of criteria for assessing research collections in federal libraries is delineated in this report. The direction of the investigation was based on a four-stage approach: (1) review the literature for

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relevant information; (2) enumerate and describe available guides and criteria, and evaluate their possible usefulness as components of, or contributions to, standards for measurement; (3) formulate test standards; and (4) test their application in a selected number of libraries. Part I of the report is devoted to a discussion of the topics mentioned above. Part II is a bibliography including references selected from the hundreds reviewed as being most applicable and pertinent to evaluating library collections. (This report is a supplement to ED 043 350.)

Descriptive Case Studies of Nine Elementary School Media Centers in Three Inner Cities; Title II Elementary and Secondary Education Act of 1965. School Library Resources, Textbooks, and Other Printed and Published Instructional Materials. 1969. 199p. ED 037 082. MF $1.00, HC $10.05.

Institution (Source) : Office of Education, Washington, D.C.

Although principals and teachers exhibited enthusiasm for the potential of the media centers programs and materials to induce change, the combined federal, state, and local funds for school media center materials are too low to make an appreciable change on curriculum, teaching methods, or pupil achievement. The scheduling policy also affected the accessibility of the media center resources and served as a deterring factor on the impact of the materials in the instructional program. The provision of media center resources, staff, and facilities prove instrumental in changing pupil attitudes toward reading and in creating a more critical attitude toward literature. The nine media centers are in an elementary phase of development; they have yet to become an integral component of the instructional program.


A literature survey of union cataloging and New England libraries determined that: (1) New England's collective union catalog needs and problems had not been specified, especially regarding the possibilities of machine application; (2) crucial data and analysis needed for such specifications were unavailable; and (3) the absence of this data prevented evaluations of relative merits of differing union catalog approaches and of different kinds of machine form catalogs. Three general union cataloging configurations were examined: (1) the single regional union catalog; (2) the combination of six state union catalogs; and (3) the random combination of state and/or interinstitutional union catalogs. Part II of this project was devoted to the development of the essential capabilities for a machine form union catalog of books and a printed union catalog of books for the New England Library Information Network (NELINET). This was accomplished by: (1) a study of machine form union catalog needs; (2) file design for present and projected needs; (3) development of techniques and programs for collecting, storing, and updating library holdings data; and (4) development of programs to produce a printed union catalog using the Library of Congress card number as the identifying element.


Institution (Source) : ERIC Clearinghouse on Library and Information Sciences, Washington, D.C.

The third annual bibliography of ERIC clearinghouse publications reflects information analysis activities of each clearinghouse. It includes all substantial bibliographies, review papers, and state-of-the-art papers identified as ERIC publications. The 366 annotated items for Fiscal Year 1970 are arranged alphabetically by clearinghouse.


An international nuclear information system (INIS) which applies computer techniques to the management of the world’s nuclear literature is about to come into operation. This prompted the International Atomic Energy Agency to hold a symposium to provide a comprehensive review of the facilities and services available in the world for providing information to nuclear scientists and engineers. The symposium was attended by 168 participants from thirty-one countries and twelve international organizations. A total of fifty-seven papers was presented. The broad subjects covered by the nine sessions are: (1) national and institutional information centers; (2) specialized information centers; (3) information services: manual, mechanized, and computerized; (4) information services: computerized (cont.); (5) primary publications; (6) secondary publications; (7) nuclear libraries and services; (8) indexing methods and systems; and (9) worldwide cooperation in scientific information. English language abstracts are provided for all of the papers.


Institution (Source): University of California, Berkeley, Institute of Library Research.

Presenting this cost analysis as a supplemental volume separate from the main report allows the chief activities in implementing the Processing Center Design to be correlated with costs as of a particular date and according to varying rates of production. In considering the total budget, three main areas are distinguished: (1) systems development, (2) conversion and maintenance and (3) output services. Separate costs are stated for the different operational phases of monographs and serials, although both types of data are considered as sharing management and development costs. The analysis first covers the purpose, scope, allocation, and descriptive basis of the three main areas for a six-month preparatory period to establish the center and three years’ full production. Appendices include a reprint of the preliminary organizational design (with minor revisions) and supporting details for the three main areas. Volumes I-IV of this report are available as ED numbers 036 305 to 036 308.


The Dallas Public Library (DPL) commissioned Arthur D. Little, Inc., to analyze the library resources in the Dallas Major Resource Center area and to identify the role the DPL should play in the development of public library service in this area. To identify the role of the DPL as a major resource center, the available services, materials, staff, financial support, and facilities were evaluated. The field work for this study, which consisted of visits to libraries, interviews, and questionnaires, was conducted from July 1969 through March 1970. The report resulting from this study is divided into the following sections: (1) demographic analysis; (2) the Dallas Public

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Institution (Source): National Center for Educational Statistics, Washington, D.C.

A continuation of the series in which the Office of Education presents general management data on the libraries of individual institutions of higher education. Statistics for 2,122 individual college and university libraries are provided. Since this is a partial listing of college and university libraries, the data are not necessarily representative and should not be used to obtain aggregates of any type. A report containing analytic or summary tables for all college and university libraries will be published later. This report is composed of the following tables: (1) number of units in library collections and holdings per full-time equivalent student in college and university libraries, by institution; (2) operating expenditures of college and university libraries, estimated value of nonbudgeted support services, and expenditure ratios, by institution; (3) library staff, vacant positions, and hours of assistance in college and university libraries, by institution and (4) number and mean salary of full-time staff in college and university libraries, by type of position, term of employment, and institution.


Institution (Source): Massachusetts Institute of Technology, Cambridge.

User experiments are the main theme of this tenth issue in the series of Project Intrex semiannual activity reports. This system is undergoing tests with users who are motivated by a need for information rather than an interest in the machinery by which it is stored, retrieved, and presented. Test results will indicate which fields in the augmented catalog are most helpful to the user, which of the retrieval program features are most effective, and which display techniques are most congenial in continued use. This kind of information will make it possible to design the future information systems in which libraries and information centers will utilize the new computer-communications technology. The seven major sections of the report are: (1) introduction, (2) research and development activities, (3) model library, (4) Project Intrex staff, (5) current publications, (6) past publications, 1969–1970, and (7) past publications, 1966–1969. The research and development activities section covers: (1) status of the program, (2) user experiments, (3) augmented-catalog inputting, (4) storage and retrieval, (5) display consoles, and (6) full-text storage and retrieval. The model library section includes: (1) status of the project, (2) point-of-use instruction, and (3) library pathfinders.


A survey of automatic indexing systems and experiments has been conducted by the National Bureau of Standards. Consideration is first given to indexes compiled by or with the aid of machines, including citation indexes. Automatic derivative indexing is exemplified by key-word-in-context (KWIC) and other word-in-context techniques. Advantages, disadvantages, and possibilities for modification and improvement are discussed. Experiments in automatic assignment indexing are summarized. Related research efforts in such areas as automatic classification and categorization, computer use of thesauri, statistical association techniques, and linguistic data proces-
ing are described. A major question is that of evaluation, particularly in view of evidence of human interindexer inconsistency. It is concluded that indexes based on words extracted from text are practical for many purposes today, and that automatic assignment indexing and classification experiments show promise for future progress.


Institution (Source): Syracuse University, School of Library Science.

The first sections give a detailed description for using the MARC II Search Program including: (1) general description, (2) implementation, (3) search criterion, (4) formation of retrieval statements, (5) list statement formation, (6) forming the retrieval request card deck, (7) errors and diagnostic messages, (8) MARC II search output file, (9) sample run, and (10) using the current printing program. The next sections describe the MARC II Search Program and the current printing program.

Wilson, John H., Jr. *Major Trends and Portents Related to Information Costs*. July 1970. 6p. ED 041 609. MF $0.25, HC $0.40.

Institution (Source): University of California, Berkeley, Lawrence Radiation Lab.

Having to account for the cost of information activities is here to stay. Budgeting is going to become more stringent and imaginative. Costs should not be equated with human values—psychological and subjective; apparently many managers do this, feeling that having to cost information activities is degrading. Some trends are: Buy products and services rather than produce them or run them in your own group. Don’t build an empire that you have to find work for; stay flexible. Money available for scientific and technical activities is going to become scarce, at least in the federal government. Technical information activities and public information activities tend to merge as we move into crime, pollution, and race programs where getting lots of all kinds of information to all kinds of people and getting them to take action on it is important. Formation of a new special interest group in the American Society for Information Science (ASIS) on costs, budgeting, and economics should initiate many necessary studies.

**PRICE CHANGE FOR ERIC/CLIS DOCUMENTS**

There has been a price change which applies to all documents announced in *RIE* through April 1, 1971. Those appearing from May 1971 are correct. The new price schedule which includes book rate or library rate postage is as follows:

- Microfiche Copy—Each Title $ .65
- Hard Copy—Each Title by 100-page increments
  - Pages: 1–100 3.29
  - 101–200 6.58
  - 201–300 9.87
  - 301–400 13.16
  - 401–500 16.45
  - Each Additional 1–1000-page increment 3.29

*Library Resources & Technical Services*
REVIEWS


In this brief treatise Professor Daly, Allen Memorial Professor of Greek at the University of Pennsylvania, deals succinctly yet comprehensively with the question of the use of the alphabet as a means of arrangement from the earliest times of Graeco-Roman civilization up to the introduction of printing. As Daly indicates, and as I can testify from having sought this information on numerous occasions, there has not been any previous systematic discussion of this matter anywhere in the literature. It is a difficult topic to deal with, for although this is a small, well-defined subject, it is so widely used and so commonly accepted that the natural inclination is to assume that it must always have been so, or that its origins are lost in the mists of antiquity. With virtually no previous work to build on, Daly has done a most remarkable job of tracking down and identifying those documents and other items in which alphabetical arrangement was used and from that material drawing certain logical conclusions about the history and development of the process. Daly characterizes his work as Contribution: and indicates that there are likely to be omissions and oversights in any first effort of this kind, yet it is hard to imagine that he has missed much or that future efforts will substantially change his conclusions.

It is a subject on which librarians can take some measure of pride for it appears relatively certain that some of our predecessors were instrumental in the initial discovery and utilization of alphabetization. Perhaps this has been one of the most important contributions of librarians to civilization! Daly concludes that although the principle of alphabetization was available to the Greeks when they adopted the Phoenician alphabet with its fixed sequence of characters, it was almost five centuries before the need for its use led to its development. "All of the evidence seems to point to Alexandria as the point of origin in history of alphabetization and the period of the first two Ptolemies as the significant time." (p.93) While the administrative needs of a bureaucracy involved in registers of lands, houses, slaves, etc., played a role, "... the organization, classification and cataloguing of the library of Alexandria, in which it is clear that the alphabetic principle was applied, at least to judge from the evidence from what is known of Callimachus' Pinakes, is an event and an undertaking which seems to me most likely to have provided the need and occasion for the effective conception and application of the principle." (p.94) From that point on Daly traces in detail the somewhat sporadic use of the principle in Greek and Roman antiquity, with surprisingly limited use in Rome, through the Middle Ages, and up to the invention of printing. Unfortunately, it was lexicography, not librarianship, which was the sole line of continuity for alphabetization from its discovery through the Middle Ages. Finally, "... we have noted the inception in library catalogues [from the monastery at St. Bertin, and from Corbie and Whithby] in the twelfth century and in bookkeeping in the thirteenth. The general upsurge of scholarly and administrative activity in the twelfth and thirteenth centuries, particularly in France, put the practice of alphabetization firmly on the path which it has continued to
follow in these fields, and the rise of printing tended to fix and promote the practice.” (p.96)

In tracing the fact that in some early uses material was placed in order only by first letter or by the first two or three letters, rather than in absolute order, Daly speculates on how the process might have been carried out. In doing so he sheds new light on the use of slips or cards as a means of arrangement and as an aid to the process, and thus on the antecedents of the card catalog. Other writers have assumed the early use of cards or slips but he concludes that there is no evidence to support this: no early examples can be found; there is no proper word in either Greek or Latin for slip in this sense through the Middle Ages; and the use of papyrus or parchment for such purposes would have been an extravagant waste of materials. “The use of such cards or slips would appear to be a thing that has come about as the result of the availability of relatively cheap and abundant paper.” (p.86)

The first example Daly can find of the use of slips is in a Laurentian manuscript of Eustatius from the twelfth century. The next is the Auctorum et Materiarum Index Librorum Graecorum manu scriptorum Bibliothecae veteris Vaticanae alphabetico ordine digestus et tribus omnis distinctus ... compiled by Leo Alattius in the late seventeenth century. This catalog was compiled by writing out the entries on sheets, alphabetizing the sheets, and then pasting them on the leaves of the volume they are now in. This is by far the earliest citation I have seen yet for the use of slips or cards for library purposes and would seem to be the earliest known antecedent of the card catalog.

This brief work is an outstanding example of how historical scholarship can utilize the analysis of primary documents to identify and trace the growth and development of an aspect of civilization no matter how minute.

It is also a fascinating work to read, for Daly has done an excellent job of putting his material together so that all can read and understand what he has to say. It is recommended to all those interested in the history of bibliography and cataloging for it sheds much new light on a small but important aspect of that subject.—Norman D. Stevens, Associate University Librarian, University of Connecticut Library, Storrs.


The second edition of the MARC Manuals, like the first edition, is really four separate manuals bound as one. And for the delight of catalogers, each of the manuals carries a separate and different edition statement.

The first manual, Books: A MARC Format, is the 4th edition (April 1970) of what previously was entitled Subscriber's Guide to the MARC Distribution Service. It contains detailed information on tape specifications and is essential for all MARC programmers. (Unfortunately four addenda have been issued since the publication of the manual which the user must order directly from LC.) The second volume, Data Preparation Manual: MARC Editors, is listed as the 3d edition (April 1970). The Data Preparation Manual is the manual used by the MARC editors at LC and is, therefore, probably the most interesting, important, and useful for librarians. As a guide for analyzing and interpreting MARC records it is indispensable. The third volume, Transcription Manual: MARC Typists, is listed as the 2d edition (April 1970). The Transcription Manual describes the keyboarding procedures currently in use at LC and in-
cludes a wealth of valuable information on keyboard layouts, correction routines, and the like. The last manual, *Computer and Magnetic Tape Unit Study*, has no edition statement or date.

The publication as a whole seems easier to read than the first because of the greater contrast between type and paper. Unfortunately, it is more difficult to use because there is still no index to any of the volumes (a bad feature of the first edition and aggravated in the second edition by the deletions, corrections, and additions). This is especially vexing in the *Data Preparation Manual*, where in theory, the lack of an index is compensated for by the arrangement of material by MARC variable field tags and a chart giving page numbers of fields, indicators, and codes. The material is not strictly organized by tag (tags 241, 040, 082, 001, 051 follow the main body of the work in that order), nor are all page numbers given (tag 241, newly added in this edition, has no page reference).

Except for the *Computer and Magnetic Tape Unit Study*, which seems unchanged, the amount and kind of revision given each manual in this edition varies greatly. A note at the beginning of the first three manuals states that all “significant changes are indicated in the margin by a double asterisk (**).” This is done indifferently for corrections, inconsistently for additions of new material, and almost not at all for deletions.

In *Books: A MARC Format*, for example, the EBCDIC to ASCII conversion table is omitted without note. Anyone initiating the development of a MARC program who is not aware that such a table exists will have to develop his own (certainly no great effort), but the resulting set of codes will bear no resemblance to those in use at LC or anywhere else. I hope that the table will be reinstated with the next edition.

The most extensively revised manual (almost 100 new pages) is the *Data Preparation Manual–MARC Editors*. A casual perusal would lead one to believe that revisions are exclusively corrected examples and minor textual insertions. In fact, a great deal of important, new information is included (but not asterisked, which causes a user unnecessary problems if he or she is attempting to compare or use the two editions). For example, “Bibliographic Price” (350), “Bibliographic Control Numbers” (015, 020, 025), “Subject Added Entries” (600-651), “Added Entries” (700-740), and “Control Number” (001) are all extensively rewritten and include a great deal of new information. In addition, there are major and important insertions of new sections (again, without asterisks), such as “Other subject headings” (p.111-14), “Encoding level” (p.157), and “Date of Publication: Additional Guidelines” (p.162-64). The convention of including both the numeric tag and its mnemonic equivalent (e.g., personal author main entry is 100 or MEP) is continued in this edition, but again, unfortunately, only the mnemonic tag is given in examples. This unnecessarily complicates the analysis of examples, and one hopes that future editions will include numeric tags for all examples.

The *Transcription Manual: MARC Typists* in this edition is in many ways the most interesting of the manuals included because it indicates that keyboarding procedures have changed significantly at LC but gives no reasons why. Paper tape devices which were used initially have been replaced with IBM MT/ST’s. One wonders why, and hopes that LC will at some point write up and publish its experiences. Examples of newly designed MARC worksheets are included which display a great deal of experience and judgment in designing a form to solve a very complex and nagging problem.

These manuals have proved to be enormously valuable and indispensable to anyone developing MARC programs and, therefore, it is extremely gratify-

Contains two separate studies with recommendations. The first study was performed by a management consultant who applied the principles and practices of organizational structure and business efficiency to libraries. The second was performed by a cooperative effort between librarians of three research libraries. There are similarities. For instance, the theme of both might be characterized as "More efficiency with less work duplication and 'carefulness.'"

The two studies were made without reference to automation but with large research libraries in mind. This has led to recommendations which are meaningful to daily library business. Librarians who view libraries as structured organizations will benefit from applied management principles. Regional libraries are included, but functionally integrated community college libraries are omitted as too different a breed.

How shall we organize our libraries for optimum use? Part one is a reprint of a report prepared by Dr. H. von Kortzfleisch, management consultant who was retained to investigate and develop standard guidelines for the organization of research libraries within conventional parameters, that is, without recourse to electronic data processing techniques. The author applies the rationale of scientific management to each major library activity and to defining functions and work flow in logical statistical terms.

Part two states the problem in simulated model situation for which three large German research libraries provided the given situation. Recommendations and optimal solutions are provided as a model for further modification and not as the only possible solution. As above, the overriding considerations were work simplification and the policies of accuracy and safety of the records kept. Sometimes these are in conflict with one another. The management expert tends toward work simplification (fewer files containing the same or overlapping data); the librarian toward double-checking of work for accuracy. Compromise solutions are presented and tradition-ridden practices are recognized as more impacted in libraries than in other organizations.

Each library activity such as acquisitions, gifts, inventory control, exchanges, cataloging, binding, circulation, interlibrary loan, and photocopy services is analyzed in that order according to the functions and work flow suited for each. Recommendations include types of form letters and when they are applicable, when to use them, and by whom various work functions shall be performed. Alternatives are given and decision points are identified. Needed equipment is listed in detail and meaningful quantitative data are indicated.

Systems analysis by practicing librarians can only benefit from having in hand a clearly organized and well-documented work such as this.—Marietta Chicorel, Assistant Professor, Graduate School of Library Science, Queens College of the City University of New York, and President, Chicorel Library Publishing Corp.
This publication is divided into three unequal parts. The first part consists of reprints of reports written after the seminar. The second and largest part contains twelve seminar papers, while organizational details of the meeting are reproduced in the third part: the day-to-day seminar program, list of participants, and the study material distributed before the seminar.

Of the four postseminar reports which make up part one, the first two present chronological surveys of the seminar meetings. Richard S. Angell's "Survey Report"—a reprint from the appendix to the Library of Congress Information Bulletin of 17 October 1968—summarizes in three pages the main contents of the meetings. Lindsey Corbett's fifteen-page report gives more detailed digests of papers, tutorials, and discussions. On the whole these two reports are more informative for a nonparticipant than the selection of papers reproduced in part two, though it is not clear why there had to be two surveys, especially if one of them had already been published in a widely circulated periodical.

The twelve seminar papers which constitute the central and largest part of this publication begin and end with vigorous pleas by G. A. Lloyd and Malcolm Rigby, respectively, for the use of the UDC as the switching language of a future World Science Information System. Robert R. Freeman and Pauline Atherton's "Final Report of the Research Project for the Evaluation of the UDC as the Indexing Language for a Mechanized Reference Retrieval System" supports this plea, but also raises some questions concerning UDC revision procedures and the difference between deep indexing and "single entry document file organization (e.g. conventional libraries)! Similar problems are discussed more clearly and convincingly in two well-written and fully documented papers by L. C. Corbett and H. J. Norris on mechanization work carried out in Great Britain. B. Barnholdt describes and illustrates the computer-based production of a UDC-classed catalog at the Technological University Library of Denmark. In a last group of papers, T. W. Cales, Jean M. Perreault, and J. C. G. Wessel discuss various problems of subject analysis and subject representation which have no obvious relation to the stated topics of the seminar.

The Proceedings are introduced by an editorial and a preface. In the editorial Rasmus Mølgaard-Hansen outlines the objective of the seminar: "implementing internationally the results of the American Institute of Physics' UDC Project ... 1965–1968." In the preface Malcolm Rigby, the second editor, states that "the papers, some formal, some informal presented at this meeting were not intended originally for publication." It was decided, however, to reproduce them in a "semi-formal publication with a minimum of editorial changes." This editorial policy results in a deplorable lack of editorial supervision which is noticeable everywhere, but particularly in the seminar papers. The volume has no continuous pagination. Each paper has been reproduced from the original typescript with its own separate pagination. Many papers contain references to appendices and study material which are missing. The language of some of the papers, not originally written in English, is quite obscure (see for instance the "Brief Note" by A. Gallizia and G. Bardone). Having unsuccessful-
ly searched for missing references, examples, and notes, one is forced to ask: is it not the editors’ task to supervise the transformation of semiformal oral presentations into more formal publications? Also, to see that all papers become reasonably clear condensations from a larger text, not just mechanically shortened excerpts, full of loose ends; that appendices and notes mentioned in the text as present are included; or that such tantalizing references to nonexistent material are either omitted or replaced by brief explanatory summaries? The seminar may have been an interesting experience for the participants, but not much of this is evident in this carelessly put together reproduction of unedited papers.—Gertrude London, Associate Professor, School of Library Science, University of North Carolina, Chapel Hill.


In its introduction ANSCR is described as being an easy-to-apply system that assists browsers and recognizes the particular importance of performance as an identifying feature of recordings. It also claims a technical standard comparable to those of the LC and Dewey schemes for books. Given the prevalence of arbitrary and idiosyncratic shelf arrangements which make sense primarily to librarians, this prospectus should elicit an enthusiastic reaction, especially from those responsible for public or school district library recording collections. The contention that “ANSCR was created because sound recordings are a distinctive medium of communication, and their classification must be based on the qualities and limitations which distinguish them from other media” (p. xvi) is somewhat worrisome in that separate systems for motion picture films, microfiches, video-discs, and other formats are indirectly endorsed, and differences between media are interpreted as outweighing substantive characteristics. In short, media are more important than messages.

Of course the proof of ANSCR’s worth must lie in its performance. The following twelve “class numbers,” constructed in accordance with ANCSR rules, illustrate the system’s capabilities:

(1) L THOMS
     RIV
     S 95
(2) GW HIND
     SON
     B 29
(3) GW HIND
     SON
     K 70
(4) H MOZA
     SER
     K 47
(5) ZM BEETHOV
     L 92
(6) ES BEET
     5
     S 92
(7) V BIBLE
     PBR
     B 02

London 6092

Beethoven: “Symphony No. 5,” Solti conducting the Vienna Philharmonic Orchestra.
London 6092

“Pat Boone Reads from the Bible”
Boone, reader.
In each example, the top term represents one of the thirty-six ANSCR categories. EA, EB, EC, and ES differentiate between general orchestral music, ballet music, concertos (including concertos for orchestra), and symphonies. Therefore, the Romeo and Julies of Prokofiev (ballet music) and Tchaikovsky (general orchestral music) are assigned separate niches because function is confounded with form. Category L is another instance of this confusion (see example 1). Virgil Thomson’s River, Also Sprach Zarathustra

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(8) R
NEWY
“English Medieval Christmas Carols.”
EMC
New York Pro Musica Antiqua.
N 21
Counterpoint 5521
(9) F
BEET
TRI
S 19
Columbia MS 6819
(10) EC
VIVA
Vivaldi: “Concerto for 2 Oboes, 2 Clarinets and Orchestra,”
O-74
H 92
Haas, London Baroque Ensemble.
Vanguard S-192
(11) C
VERD
Verdi: “Requiem Mass, in Memory of Manzoni,” Nelli,
REQ
N 18
Barbieri, DiStefano, Gliori; Toscanini conducting the NBC Symphony.
2-Victor LM-6018
(12a) EC
TCHA
Tchaikovsky: “Concerto No. 1 in B Flat Minor,” Graffman, G 39
P-1
Szell conducting the Cleveland Orchestra.
Columbia MS 7399
(12b) EC
TCHA
Tchaikovsky: “Concerto No. 1 in B Flat Minor,” Gilels, Reiner conducting the Chicago Symphony Orchestra.
P-1
G 39
Victor VICS 1039

(from 2001: A Space Odyssey), Alexander Newsky, Exodus, Sesame Street, Peter Gunn, and The Yellow Submarine all qualify for L as music written or arranged for soundtracks. P and Q provide national and international folk and ethnic music with two classes while chamber music is restricted to one class (F). J (electronic and mechanical music) is the obvious haven for synthesizer compositions. But what does one do with hybrid works employing electronic, traditional, mechanical, and modified instruments with voices? GW must suffice for “recordings of music written or arranged for and performed by a solo wind instrument, either woodwind or brass, ... with or without the accompaniment of another instrument.” (p.76) If a woodwind is named first in the title of a duo, the classifier is instructed to place it in GW and not in F (chamber music). The system cannot clearly distinguish between sonatas scored for various wind instruments (see examples 2 and 3). “Classical” wind pieces scored for more than nine instruments are put in category H (band music) along with Sousa, brass band, and fife and drum corps music (see example 4). Examples 5 and 6 illustrate a superfluous double treatment of Beethoven’s 5th as a ZM (children’s music) item and as an ES, symphonic work for adults.

Musical forms, functions, genres, instrumentations; pedagogical purposes; and listener levels have been given equal weights as term one class headings. It is evident that ANSCR’s attempt to encompass the vast territory of (A) music appreciation, (B–D) vocal music, (E–G) instrumental music, (H–J) instrument “types,” (K–R) all kinds of popular music, (S–X) speaking human voices, (Y) sound effects, and (Z) children’s recordings is too ambitious.

Term two (second from the top in each of the examples) may be an abbreviation of a composer’s surname.
taken from the ANSCR “Table of Composers’ Names” or it may be any one of thirteen other entry types—“author,” “performer,” “title,” “Bible,” ethnic,” “geographic,” “Gregorian,” “instructional subject,” “language,” “person-as-subject,” “sounds,” or “collections.” The classifier may use the latter category if a recording is broad in scope and subject content. Examples 7 and 8, offered by ANSCR, illustrate a “Bible” entry in the V (prose) category and a “performer” entry in the R (holiday music) category. An excerpt from the “Table of Composers’ Names” follows:

Francaix, Jean — FRANC  
Franchetti, Arnold — FRANCH  
Franck, César — FRAN  
Franck, Melchior — FRAN-M  
Franco, Johan — FRANCO  
Francoeur, François — FRANCE

Note that the Francks precede Francaix, and that Franchetti follows Francoeur. The Bach family is in similar disarray; Robert Schumann, Clara Schumann, and William Schuman end up in reverse order; Van Hulse and Vanhal share the same abbreviation VANH; and there are at least seven other errors in the table. A partial explanation is given on page 134. “In some cases, several members of the same family, or unrelated individuals with the same surname have followed the same profession, but one artist in particular has achieved exceptional renown. An arbitrary pattern is adopted for the entry of such names, with the simplest abbreviation used for the most preeminent artist, and a more extended entry for others sharing the same surname.” The instructions for abbreviating composers’ names not found in the table are consistently illogical, guaranteeing the augmentation of alphabetical chaos and overly long terms.

For term three, the title indicator, the classifier may pick either an “album” or “work” title. When using a musical work title to form term three, the classifier is advised to “use the version of the title which has most popular use in current books, journals, periodicals, documentaries of motion pictures or television, and concert program notes.” (p.178) An inefficient, inadequate, uncontrolled, and unstable hodgepodge of possibilities is inevitable. In the case of a Beethoven or Mozart, specific trios (see example 9) and quintets are not identifiable, and the rule for concerto labeling can create carnage with Vivaldi’s output. “If the instruments are of different types, indicate the instrument named first in the title of the work.” (p.61) Example 10 is illustrative.

Term four consists of a one-letter abbreviation of the record manufacturer (or performer, conductor, or “big” name on the jacket) plus the last two digits of the record number. In example 11, Nelli the soloist is considered more important than Toscanini. ANSCR places singers at the pinnacle of the musical hierarchy followed by instrumentalists, vocal groups, instrumental groups, and conductors in descending order. In Verdi’s Requiem, as in many other “conductors’ pieces,” even the general public thinks first of Toscanini, Bernstein, or Barbirolli, not of Nelli, Arroyo, or Caballé. It turns out that this criticism is irrelevant because term four’s basic purpose is to insure “a unique class number for each recorded performance (i.e., version) of a work.” (p.182) But does it? What about examples 12a and 12b?

Lessons in musical misinterpretation supplement the classification gaffes. For example, we are told “when a composer has used the word “symphony” in the title of a work, but the musical form of the work is not that of a symphony, class the work according to the appropriate musical form” (p.68), while parenthetically, ANSCR states that Stravinsky’s “Symphony of Psalms” belongs in C (choral music) and not...
in ES (symphonies) because it is a work for chorus and orchestra. Stravinsky claims it is a choral symphony. So Mahler's 2d and Beethoven's 9th are choral and not symphonic pieces?

ANSCR has created its own argot to replace library lingo. "Class number," "musicologist's number," "category," and "entry" are ANSCR equivalents for librarians' "call number," "thematic catalog number," "class," and "class subdivision notation." ANSCR's term two "entries" can also be interpreted as sloppy substitutes for Cutter numbers (e.g., the earlier cited "Table of Composers' Names").

Editorial errors, omissions, and inconsistencies confirm one's hunch about the hurried and improvisatory character of this publication. On page 24, the ballet music category is mis-titled "Concert Music," the ES category is absent, and Telemann's Quintets are presented as an example in the EF (a nonexistent) category. On page 133, the reader is referred to a table of abbreviations "on page. . . ." Though "entries in the index are arranged letter by letter," one finds that Recorder, solo follows Record number; Bassoon, solo follows Bass viol; and Ethnic entry precedes Ethnic dances.

Any prospective purchaser of ANSCR must be prepared to (1) accept Bro.Dart's "basic" record collection—catalog card package deal or (2) compensate for the ANSCR category maze by concocting extraordinarily full sets of cards with analytics and added entries galore, plus a Baedeker for the befuddled browser. A logically structured, computer-compatible, concise, internally consistent, musically sensitive, and reliable system, consonant with proven cataloging and classification procedures, is still needed. ANSCR has none of these qualities and, therefore, cannot be recommended.—Richard S. Halsey, School of Library Science, Case Western Reserve University, Cleveland, Ohio.


Foskett, Douglas J. Classification for a General Index Language; a Review of Recent Research by the Classification Research Group. London: Library Association, 1970. 10s. (8s. to members). (Library Association Research Pamphlet no. 2)

Dissatisfaction with existing classification systems came to a head in England in 1957. At that time the Library Association was asked to "initiate investigations into the possibility of a new general classification scheme." Funds were secured from the North Atlantic Treaty Organization (NATO) and the Classification Research Group (CRG) was asked to undertake the necessary research. Library Association Research Pamphlet no. 1 is a result of that undertaking. Pamphlet no. 2 is a lucid summary of the contents of no. 1.

The first effort was a conference on "Some Problems of a General Classification Scheme" held in London in June 1963. A small pamphlet of proceedings was issued in 1964. This has been reproduced in Library Association Research Pamphlet no. 1. Some very interesting studies were discussed at the conference, and its "Final Statement" made a number of suggestions for future work. It was decided by the Classification Research Group that implementation of the suggestions in the "Final Statement" should be made through a special pilot project. With the funds from NATO, Mrs. Helen Tomlinson and, later, Derek Austin undertook basic research for what came to be called "the NATO Classification."

Mrs. Tomlinson began with preliminary studies of the biological sciences using the Colon Classification, but ran
into difficulties which proved insurmountable without restructuring the Colon system and working out its levels in far greater detail than then pertained. So she turned to the theory of integrative levels, which had been discussed at CRG meetings, and discovered that each level did not, as pure theory required, incorporate all those lying below it in the series of levels. Animals, for instance, did not include plants. The theory did not prove to be adequate for establishing a sequence of classes very much different from that used in several existing classification schemes.

Mrs. Tomlinson next studied fundamental categories and Farradane’s “operators.” She was able to identify categories reasonably well, but the “operators” did not automatically reveal relationships, and the need for additional cross-references made these seem less than useful to a general scheme. After dealing with the biological sciences, she worked out a similar study, for comparison, with the geological sciences. Again, the Colon Classification proved inadequate and the theory of integrative levels had to be “bent” rather severely to “accommodate necessary material in the right place.”

In developing the concept of an “entity” for the New Classification Scheme, it was determined that an entity should be located in the scheme at a place where “its relations with neighbouring items are a constant.” Many entities are treated in more than one subject field, but there is only one place where each one is an entity per se. For example, the lowly coquina (Donax variabilis), may be an ingredient of chowder, the component of a loose conglomerate rock, a collector’s item, the ingredient of shell art work and so on, but it is only constantly a bivalve, and would be permanently listed among other bivalves. On the other hand, the same entity may be required in different positions in different classification schemes made for different purposes. The attempt to place each entity in a single sequence of levels, as required by integrative level theory, proved impossible. Rather, some kind of branching was required.

The branching plus other considerations are illustrated in a “Table of proposed general categories.” There are five branches for concrete entities, each composed of levels of complexity from simple to most complex. There is an entirely separate line of levels (unfilled as yet) for “mentifacts,” Barbara Kyle’s useful term for human mental creations (as opposed to “artefacts” for human physical creations). Also, there are three columns for “Properties of entities,” “Activities,” and “Properties of activities.” The latter categories received little treatment and were studied by Derek Austin. A level in one sequence is not closely related to a level in another branch, though the chart shows them adjacent in columns.

The table does not include time, but Mrs. Tomlinson notes that time in one form or another is important in almost every subject field. An example of application of the table to geological material has been given (p.38-41). Another branch, “systems,” has been temporarily outlined, but not included in the printed table.

The next stage was the application of the tentative table to various subject fields: mining, sculpture, physics, and politics, plus sections on the relationship between geology and mining, and the distinction between chemical and physical entities. The applications form the bulk of Mrs. Tomlinson’s work. The tables accompanying these various sections are most interesting. The ones on sculpture and politics are probably the first ever to be made treating these subjects as sciences are treated, though Barbara Kyle was working in that direction. “Artefacts” throughout includes raw material as well as what man has done to it. This spectrum from marble to Michelangelo’s "Da-
vid" is handled well. One thing missing so far is a category or subcategory for such things as type of experimental method, which is important in physics, as well as for equations, laws, hypotheses, theories, etc. One looks in vain in the geology table for uniformitarianism, for example. Also tools have not been added, such as telescopes, cyclotrons, voting machines, etc., but their output is given. These things apparently are expected to come at a further stage in the work, judging from Mrs. Tomlinson’s approximations given in her summary (p.76-80), and they await also upon agreement for a definition of the term “mentefact” which can cover both an abstract concept such as hardness and a purely creative one such as a poem. Undoubtedly “mentefacts” will have a set of integrative levels or equivalent, probably with branches, too.

The contributions of Derek Austin are much more difficult to understand, partly because the exposition leaves much unexplained. He gives the results of his labors, but not the steps by which he reached his conclusions and, in some cases, no indication of what diagrams mean or what is needed to understand tables. It is recommended that the reader skip all the articles by Austin and read only the summary of his work (p.114-24), plus the tables in Appendix 2.

Austin has developed properties and activities to a considerably more advanced degree than Mrs. Tomlinson. He made use of Farradane’s “operators” in a modified form and has produced interesting relative and positional term schedules. His provisional schedule of entities is considerably less satisfactory than Mrs. Tomlinson’s in this reviewer’s estimation. The difference between the two is that hers is analytic in approach and execution, creating a classification of concrete entities to various levels of complexity and possibly lending itself to the conventional type of thesaurus development; while his is organized by the systems approach, presumably on some evolutionary scale, since one would hesitate to call his various systems a gradation in complexity. His attribute terms and such would require a new type of controlling thesaurus. With neither investigator has there been enough emphasis on artefacts and especially mentefacts, though in both cases this is promised and it is recognized that there are tremendous additions possible here. Can the concrete and systems approaches be reconciled? Both options are intriguing.

In the reviewer’s opinion, which may be incorrect, Austin’s “Provisional schedules of entities,” with his systems outlook, are really organizing principles. Everything in the universe of knowledge can be a member of one or more systems, usually several. Mrs. Tomlinson’s “Proposed general categories” belong with Austin’s schedules because she has differentiated the actual entities well, but there is conflict between the two which needs reconciliation. It is not an “either-or” proposition, but both. This “both” characteristic should become more apparent as work proceeds on the mentefacts angle, which seems the logical next step. So far mentefacts have been pretty well ignored, even though it is quite obvious in many places that theory has made the discovery and labelling of entities possible. In some cases, the idea of a subject or system is what makes possible the collection or accretion of its body of knowledge. The proof of this is the constant development or evolution of “new subjects” which are mostly new because they embody a new organizing principle, a new angle of approach to old material (quantitative history, for example), a new theory to explain a new discovery, or a realignment according to a new theory. Knowledge seems to progress by these methods rather than by major discovery of totally new areas of previously unknown entities. The CRG abandonment of the “subject” method of ascer-

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taining main classes recognized this and appears to be a major advance in the development of modern classification.

Douglas Foskett’s pamphlet (no. 2) is an introduction to and summary of the first pamphlet. The reader is advised to read no. 2, then no. 1, and finally, no. 2 again. Foskett has pulled the significant parts out of no. 1 and explained them. His pamphlet is must reading for anyone interested about modern thought in classification. It is well written and clear, especially with regard to faceted classification. The theory underlying the method, with all kinds of examples and near-relations in method, is lucidly explained.

The fact that progress in classification research has been and is being made without full development of the theory needed for explication is an interesting phenomenon of the times. Foskett plainly shows how far we have come from the old idea that there was an “obvious” hierarchial system of knowledge. The obvious has now become most obscure.

Foskett has added to the work of Tomlinson and Austin, or perhaps he has brought out things that are not clearly described in their work, as exemplified in pamphlet no. 1. The search for an ideal generalized classification scheme has given way to the idea of “a universal structural language for all information control purposes” (italics mine). The idea of purpose has been added. Mrs. Tomlinson mentions this briefly and Austin does in another paper. A series of levels based on human needs or drives is suggested. This is an interesting development and suggests a whole new area for work in classification.

Other aspects introduced include “levels of disintegration,” “levels of artefacts,” and “levels of mentefacts.” For example, cells, molecules, organs, etc., make up a pig. Disintegration makes pork, lard, soap, pigskin, and so on. Unlike mechanical or even physical objects, an entity does not necessarily come apart the same way it went together. The levels of artefacts and levels of mentefacts depend upon a human-determined purpose. They are deliberately made or created and do not occur in nature except as a concept applied to nature.

Planned experiments for testing and improving the conclusions to date are to come in the next few years. The twenty-one years of the Classification Research Group have been well spent and the two coming-of-age pamphlets may prove to be the most significant contribution to classification since Ranganathan published his Prolegomena.—Phyllis A. Richmond, School of Library Science, Case Western Reserve University, Cleveland, Ohio

CONFERENCE ON OPERATIONS RESEARCH

On August 2, 3, and 4, 1971, the University of Chicago Graduate Library School will hold its 35th annual conference at the Center for Continuing Education (1307 East 60th Street, Chicago). The topic will be “Operations Research: Implications for Libraries.” The conference is expected to be of particular interest to those concerned with the planning of library services, problems of operational decisions in library management, and library education. For further information contact the Graduate Library School, University of Chicago, 1100 East 57th Street, Chicago, Illinois 60637.
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*Williams, J. F. A. and Fidler, V. M., "A Study of the Access to the Scholarly Record from a Hospital Health Science Core Collection," Report No. 54, Wayne State University, School of Medicine, Library and Biomedical Information Services Center, Detroit, Michigan, January 1970, 8pp.

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