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Authority Control in the Online Environment

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Authority control work has been affected as libraries implement online catalogs. Individual libraries rely on the Library of Congress but still need local control for original cataloging and for integration of old headings with new or changed headings. Automation allows showing the work of establishing and maintaining headings through cooperative ventures like the NACO project.

Methods of providing authority control have changed dramatically in recent years in response to library automation. In his review of cataloging in 1982, Gordon Stevenson states that the local authority file is becoming obsolete.[1] Yet as long as individual libraries have local catalogs, the function of authority control—to ensure consistency of headings—needs to be reflected at the local level.

Authority work changed at the Ohio State University Libraries (OSUL) as cataloging became automated and control was provided for an online catalog. The changes have preserved the traditional functions of authority control, while making use of the capabilities of the computer and the availability of machine-readable data. Shifts have occurred in when, how, and by whom authority work is done. These shifts can be described as the move from pre- to postcataloging authority work; the separation of mechanical and intellectual tasks, with the automation of the former; and the imposition of authority control at different levels (i.e., national library, network, or individual library).

Before automation, authority work was done at the time of cataloging. AU the headings to be used were checked in the authority file. This checking revealed whether the headings had been used: if so, in what form; if not, whether they were variant forms of existing headings or new to the catalog. Headings that were new to the catalog were established: a unique form (distinct from other headings in the catalog) was formulated, variant forms identified, and the relationships between headings shown.

Auld points out that the availability of cataloging copy (LC cards) caused many libraries to do away with their authority files.[2] This is evidence of the shift in the level of authority work, from the individual library to the Library of Congress. The intellectual work of determining unique forms did not have to be repeated, but it was still necessary to integrate headings into the local catalog (the element of control). For this reason, OSUL continued to maintain an authority file. Authority work was done at the time of cataloging, but became primarily the recording of LC's decisions and establishing references for the local catalog.

The use of machine-readable cataloging data further modified authority work. At OSUL, the decision was made to increase cataloging productivity by removing authority work from the automated (copy) cataloging procedure. The authority work that had been done before cataloging was now done after the catalog cards were received from OCLC. The main-entry card was used

to check all headings against the authority file and to establish new headings for the file. Authority work also included the correction of headings that were not consistent with the catalog (for example, they matched a *see* reference, were different forms of name, etc.). This separation of authority work from the cataloging procedure was a division of labor in response to the online environment.

Another division of labor also developed: the separation of the mechanical and intellectual tasks of authority control. Matching headings is not an intellectual task; solving discrepancies and establishing new headings are. However, by turning heading matching into a purely mechanical task, the control function of integrating new with existing headings in an individual catalog is lost. While mechanical matching determines that the heading coming into a catalog is already present, it cannot determine whether the new usage is consistent with the old. The abandonment of local control allows productivity to increase; the work done elsewhere is accepted without further evaluation. It is based on this assumption: the library's catalog is a subset of a larger catalog (i.e., the Library of Congress'), so if this larger catalog is consistent, it is not necessary to check for consistency at the local level.

Authority control provides the structure necessary for a catalog by distinguishing headings and showing relationships between and among them. The online catalog, therefore, has to include not only machine-readable records but also machine-readable equivalents of references. In planning the evolution of our online catalog, we included the capability to store and display references. This was achieved through the creation of a headings file that serves as an authority file.[3] The file controls the catalog by serving as an index to the bibliographic records. Additional features are the ability to make global changes to headings and the automatic matching of incoming headings against existing ones.

Ideally, authority work is exercised concurrently with the establishment of the catalog. At OSUL, however, the machine-readable records (the basis of the online catalog) were created before the capability to control them existed. It was especially important to go back and establish control in two areas: to consolidate variant forms under a unique heading and to add references.

When the headings file was created from the headings in the bibliographic records, the precision of machine matching distinguished minor differences (see figure 1). A year-long editing project consolidated variant forms of names. Problem headings were identified both in normal work flows and through the systematic checking of frequently used names (literary authors, composers, etc.). Two librarians and one experienced support-staff member (each working part-time on the project) resolved conflicts and prepared correction forms. A half-time clerk typed optical scanning forms for offline input. Most of the reported problems involved typographical errors or the addition or omission of information such as a middle name, dates of birth and death, etc. A few other discrepancies resulted from differences in spacing, punctuation, or word order. In all, variant forms were consolidated for almost four thousand headings. Figures 1 and 2 show the headings file before and after this editing. The AACR2 form of name was used if available.

Unique headings are only part of authority control. The other part is the references. The availability of the Library of Congress' Name Authority Tapes allowed for the addition of references using that machine-readable data. Records from these tapes were added to our online catalog. A record was added when a heading on the tape matched a heading in our catalog; the references associated with the name were added. Altogether, more than 175,000 references were added.[4] An added benefit of using the Name Authority Tape was the ability to flip to the AACR2

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 1 BENSON,   DOUGLAS K.
13 Benson,   E. F.
30 BENSON,   EDWARD FREDERIC
 3 Benson,   Edward Frederic,  1867-
54 Benson,   Edward Frederic,  1867-1940.
 1 BENSON,   EDWARD FREDERIC, 18671940.
 1 BENSON,   EDWARD FREDERIC. U867-1940
 1 BENSON,   EDWARD FREDERIKD1867-1940.
 1 BENSON,   EDWARD FREDERICK
 3 BENSON,   EDWARD FREDERICK. 1867-1940
 1 BENSON,   EDWARD WHITE, BP. OF CANTERBURY
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Fig. 1. The Headings File as It Was Created.

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  1 BENSON DOUGLAS K.
107 Benson, Edward Frederick,  1867-1940.
  1 BENSON, EDWARD WHITE, BP. OF CANTERBURY
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Fig. 2. The Headings File after Editing.

form of heading when the earlier form was present in our catalog (similar to OCLC's use of the tape in December 1980). Figure 3 shows such a flip. More than 24,000 headings and seventy-two thousand associated records were so changed.

If the OSU Libraries' catalog had contained only Library of Congress records since 1978 (when machine-readable authority records were first created) or only frequently used headings (which were retrospectively converted), the application of the Name Authority Tape would have been the ideal way to bring the local file under control with no human intervention. In reality, our catalog contains nearly one hundred years of cataloging. Only 20 percent of the names in the catalog matched names on LC's tapes. Because portions of the data in the catalog had been added without authority control, some of the changes imposed by the tapes were not valid, or were at least suspect, and required checking by a cataloger. Approximately 4 percent of the changes were determined to be erroneous and required correction.

The use of the Name Authority Tape brought part of the existing file under authority control; these headings were given a verified status. The remaining headings will be controlled as they are used again. When new bibliographic records are added to the catalog, their headings are automatically matched against the headings file. Those that are not found or that match unverified headings are reported. These are searched in the LC Name Authority File on OCLC, and references added manually when found. The remaining headings are evaluated by a cataloger. While the matching functions of authority control have been simplified and speeded up by automation, the reasoning functions are left to the human intellect.

This procedure utilizes the authority work done at a higher level, but only begins to tap the advantages of automation. Data is transferred manually between two machine-readable files of authority records. This transfer is necessary because we want the references established by LC to appear in our catalog. While the addition of the Name Authority Tape to the catalog provided onetime addition of references, this is not considered a viable alternative for ongoing authority control. The addition of future tapes would have to be delayed until the headings on the tapes had

been used in our catalog; thus there is a trade-off between convenience and timeliness. Because only 26 percent of name headings have references,[5] the processing of the tapes and programming support is deemed too expensive for us.

1 BENSON, DOUGLAS K.
107 Benson, E. F. (Edward Frederic), 1867-1940.
Benson, Edward Frederic, 1867-1940.
SEE Benson, E. F. (Edward Frederic), 1867-1940.
1 BENSON, EDWARD WHITE, BP. OF CANTERBURY

Fig. 3. The Headings File after the Application of the Name Authority Tapes.

An alternative method would be to compare the catalog headings to the authority file, rather than the authority file to the headings. This would have to be done for us by a network or consortium as it is not feasible for the OSU Libraries to maintain the LC Authority File to control incoming data. The University of California system uses this method. When a library uses a controlled database, the authority work is concentrated and does not have to be duplicated by each member library. A database with no control of headings in incoming records could offer control of outgoing records. The headings used could be matched against the Name Authority File and a library's archive tape could include both cataloging and authority records.

The preceding discussion of authority work shifting to a higher level, outside the individual library, does not take into account original cataloging. The assumption that a library's catalog is a subset of a larger catalog is true only for a library that catalogs only with copy. A library's catalog is not a subset of a union catalog (such as OCLC) until the unique titles cataloged by that library are added to the union catalog. What is the impact on authority work?

We have found that the authority work done by the catalogers has not changed with automation. It is still done prior to cataloging and involves checking proposed headings against existing ones. New headings are established, with variant forms and related headings identified. However, authority work is done against the union catalog: proposed headings are checked against the local catalog, the LC Name Authority File, and the OCLC database. Our catalogers no longer integrate new headings only into the local catalog; they integrate them into OCLC.

These, then, are the paradoxes of authority work in an online environment. Automation enables resource sharing that allows authority work to be done at a higher level. The individual library no longer does all its authority work. At the same time, the authority work that is being done at the local library level is more complex, time-consuming, and costly because of the demands of resource sharing. This work is not shared and is repeated by many libraries.

Ideally, any authority work done on the local level should be made available to other libraries to reduce duplication of effort. A step in this direction is being taken by the Name Authority Cooperative (NACO) project. Selected libraries create authority records that are added to LC's Name Authority File, making those libraries' authority work widely available. Libraries that gladly avoid the cost of total local authority control by accepting the "catalog subset theory" must realize their role in creating, through original cataloging, the universe of cataloging. Original cataloging must be consistently integrated into the catalog (database) through authority work.

Automation presents another challenge to authority control. The compatibility of machine-readable records has led to the expansion of local catalogs with previously unavailable

data, which is often not under control. Our online catalog, for example, also contains records for ERIC documents and acquisitions records. At the same time that we are working to bring our catalog under control, we are routinely adding uncontrolled data to the catalog. We are facing the reality that the consistency of authority control is not always compatible with the desire to provide more information.

Avram states that when authority work takes place higher in the hierarchy, there is less duplication of effort.[6] Automation provides another intriguing alternative: authority work can be shared regardless of the level at which it is created. The authority work of an individual library can be contributed to a consortium or network. And the authority work of the user can be integrated into a catalog.

Part of the purpose of authority control is to free the user from having to identify distinct forms of headings when searching the catalog. The variations are identified at a different level and references provided. The user, however, may have variant forms unanticipated by the creator of the references. An automated system can record headings used in unsuccessful searches, which can be added to the catalog (as references) if necessary.

Authority work has changed and continues to change in the online environment. The prediction of Nancy Williamson is already holding true: "The intellectual challenges of organizing information and retrieving it will not disappear. . . . Authority files could assume an increasingly important role as control mechanisms, although their format and content may be significantly different from the authority files with which we are currently familiar."[7] Perhaps the individual authority file as a passive tool has become obsolete. Online authority files are interactive: they can interact with the catalogs that they control and with the users of those catalogs. Authority work may be done at different levels, in differing degrees. Adapting authority work to control online catalogs remains a challenge to librarians.

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