The Library of Congress’s (LC’s) recent implementation of subfield v—
“form subdivision”—in subject heading strings (USMARC bibliographic
fields 600–651) has raised the collective consciousness of catalogers
about the many questions that remain unresolved regarding the provision
of access to form data in online catalogs. These questions are shared by
thesaurus builders, system designers, public services librarians, and,
perhaps unknowingly, by searchers.

Information about the form or genre of a work or physical item, as
distinct from the subject of the work, can be found in a variety of places
in the USMARC bibliographic record. The 006, 007, and 008 fixed fields
contain coded form data, such as the books format 006/17, “biography.”
Some subfields of the 240, uniform title field, also contain form data,
such as subfield s, “libretto.” Likewise, the 245 title field may include a
general material designator (GMD) for materials other than print-on-
paper, as in subfield h, “computer file.” Subject headings have long
included form data, even though it was not coded as such; for example,
“dictionaries,” or “scores and parts.”

Until recently, LC has continued the longstanding entanglement between
“works of” (i.e., form headings) and “works about” (i.e., topical
headings). The Library of Congress Subject Headings (LCSH) scope note
for the heading “Large type books” exemplifies this ambiguity: “Here are
entered books set in a type size larger than normal for the benefit of
persons with impaired vision, as well as works about such books.” In
addition to the peculiarities found in LCSH, the nature of form data and
how it is included in subject headings has varied depending on the
thesaurus used, the field of study, and the physical characteristics of the
material. Cataloging practices across disciplines have been inconsistent
in treating form data, and online catalogs reflect these inconsistencies.
Background

At various times during the twentieth century, writers have attempted to define form and to explain its presence in subject heading lists. But the issue did not receive any serious attention until the 1970s. During that time, several different specialized communities began to push for a way to MARC-code terms falling into the areas of form, genre, and physical characteristics. In the late 1970s the rare book, archival, and visual resources communities proposed that new MARC fields be added for form/genre and physical characteristics. A new field for form/genre was approved and placed in the 6xx block of USMARC because of its association with subject headings in everyone’s minds. The physical characteristics field (755) was approved in 1983 when definitions for the two fields were presented. Following this a number of thesauri were prepared giving instructions as to whether the terms should be coded 655 or 755.

The ALA Association for Library Collections & Technical Services (ALCTS) Cataloging and Classification Section (CCS) Subject Analysis Committee (SAC) got involved in the late 1980s through a subcommittee to prepare a thesaurus of terms to use in the 655 field for fiction materials. *Guidelines on Subject Access to Individual Works of Fiction, Drama, Etc. (GSAFD)* were published in 1990, and in 1991 a project was begun through OCLC to add these terms to bibliographic records. The participants discovered that they needed an authority structure for these terms. Most academic librarians paid little attention to these developments, as they believed they were not going to add these terms to their catalogs. Although academic libraries did allow input of 655 and 755 fields, these fields were seldom indexed.

In 1991, a meeting at Airlie House in Virginia attempted to address several questions about Library of Congress subject heading strings. Among those questions was the treatment of form elements. Several recommendations from that conference were forwarded to SAC for further review. In response, the SAC Subcommittee on the Nature of Form Data was appointed in 1991 and met until 1994. The subcommittee developed a definition of form data and determined that, in some cases (such as musical scores), it was impossible to separate the physical and intellectual form of material.

Another result of the subcommittee’s work was the recommendation to eliminate the USMARC Bibliographic field 755, “added entry-physical characteristics,” a field used extensively by rare-book catalogers. This recommendation came almost simultaneously with recommendations from the rare-books community and arts community. The Machine-Readable Bibliographic Information Committee (MARBI) voted in 1995 to make the 755 field obsolete. While not deemed entirely satisfactory by all rare-books catalogers, this decision resulted in simplification for many catalogers who were unsure whether to use the 655 or 755 field.

During this same period, the SAC Subcommittee on the Order of Subdivisions in Library of Congress Subject Strings was evaluating whether the order of topical, geographical, chronological, and form subdivisions in Library of Congress subject headings should be standardized. The subcommittee identified cataloging practices in several...
specialized areas, such as art, music, history, and literature, that represented particular difficulties with the proposed standardized order. In its final report, the Subcommittee on the Order of Subdivisions rejected the idea of immediately implementing a standardized order for subdivisions, recommending instead that “some level of default order is possible if several broad areas of exceptions are identified and specified.”

The Subcommittee on the Nature of Form Data also recommended establishing a subfield code for form data in subject heading strings. SAC’s initial considerations of the proposed subfield code revealed a number of issues thought to be, and indeed are proving to be, difficult to resolve. Among the issues SAC identified were retrospective conversion, varying cataloging practices and user needs across disciplines, no distinct list of form headings, cataloger training, and the redundancy of content in USMARC record elements.

Recognizing the serious implications of these issues, SAC members were divided on how to vote for a new subfield code. For some SAC members, the decision to vote in favor of the subfield code was influenced by the fact that several thesauri already had a distinct list of form subdivisions. Without a subfield code for form, users of these thesauri were forced to code form data as general or topical in nature. Even though LCSH did not have a separate list and seemed unlikely to develop one, these facts did not dissuade SAC members from ultimately voting in favor of a separate subfield code for form. In reaching its final decision, SAC appropriately focused on the broad range of subject access systems whose terms may be recorded in the USMARC 6XX fields.

Likewise, opinions were mixed about whether a form subfield code, were it implemented, would actually be used. Some SAC members felt that such a subfield code was an intermediary step, and that once subject heading strings included a separate subfield code, form subdivisions would be moved to the 655 field. At the time it also appeared that online systems and retrieval software would work more efficiently with postcoordinated searching. Most librarians realized that breaking apart subject heading strings might negatively affect presentation of data in index displays. However, they felt that better options were limited and unlikely to be developed.

In addition to SAC members, there were also MARBI members and representatives who were skeptical about the proposed subfield code. They wanted to be sure that, if approved, the subfield code would be implemented as intended. After much discussion, MARBI, in 1995, approved the new subfield code, which was assigned the letter v.

To help address concerns that had surfaced during the decision-making process, the SAC Subcommittee on Form Headings/Subdivisions Implementation was appointed. The subcommittee’s charge was to coordinate, communicate, and provide research on form/genre implementation issues. As an initial step, the subcommittee surveyed local system vendors and thesaurus builders to determine who had developed form terminology appropriate for either the 655 field or subfield v and how that data was made available in online catalogs. The subcommittee held a vendor forum at 1997 ALA Midwinter Meeting during which a number of real and imaginary online displays containing
form/genre data were presented. Both vendors and librarians responded to these presentations. All agreed that improvements were needed and that software development was dependent on an increased demand by library administrators. In turn, it was recognized that this increased demand was unlikely to happen until LC implemented subfield v and the 655 field.

To further raise the library community’s awareness of issues relating to form/genre data, the subcommittee developed a reference questionnaire for distribution among public service librarians across a variety of institutions. At 1997 ALA Annual Conference the subcommittee and the CCS Cataloging of Children’s Materials Committee cosponsored a program titled, “Everything You Wanted to Know About Form/Genre Access but Were Afraid to Ask.” This program featured speakers who represented form/genre issues in children’s materials, electronic media, and music, as well as those who provided a historical overview of form/genre concerns and a progress report from LC.

In 1998 the subcommittee hosted a review by the British Library Fiction Indexing Group of the GSAFD and began preparing for an educational forum to be presented at 1999 ALA Midwinter Meeting. This forum provided information about the newly developed form subdivision authority records and LC’s progress in implementing the use of these subdivisions. A set of subdivision coding exercises was administered, revealing how to appropriately identify, apply, and code these subdivisions in a USMARC bibliographic record. As a wrap-up, demonstrations of improved search and retrieval methods for form/genre data were made by subcommittee members. Another such forum is set for 1999 Annual Conference.

Current Implementation at the Library of Congress

In 1995, a Form/Genre Working Group was established at the Library of Congress, headed by the assistant chief of the Cataloging Policy and Support Office. The original charge of the working group was “to create lists of form/genre headings and subdivisions and to develop and document guidelines for the use of subfield v and the more widespread use of the 655 field.” The group also has considered the related task of developing USMARC authority records for genre/form headings. Many competing priorities, particularly the implementation of LC’s Endeavor system, have complicated the working group’s time frame for proceeding with its charge. Nonetheless, coding of subfield v in current cataloging and the creation and distribution of subdivision authority records have begun. In addition, LC’s Motion Picture, Broadcasting and Recorded Sound Division, Moving Image Section has developed and implemented the Moving Image Genre-Form Guide, a thesaurus of 150 faceted genre/form terms used in the 655 field.

LC’s implementation of subfield v has been conservative, beginning by simply coding as form the subdivisions that catalogers assign when the subdivision describes what something is versus what it is about. Even with this cautious beginning, LC is finding a number of inconsistencies in the application of the designated subdivisions and is attempting to
address and eliminate these inconsistencies as quickly as possible. LC has decided to retain the practice of coding a subdivision based on its purpose in the subject string (a recommendation of the Subcommittee on the Nature of Form Data). For example, the heading of a book primarily containing agricultural statistics would be tagged:

650 0 Agriculture $v Statistics

By contrast, the coding for a work discussing the use of statistics in the field of agriculture would be:

650 0 Agriculture $x Statistics

Tools to Help with Implementation of Subfield v

The Library of Congress presently indicates form subdivisions in the “Free-floating Subdivisions List” (H 1095) of the Subject Cataloging Manual, as well as in the separate publication, Free-Floating Subdivisions: An Alphabetical Index. Because form subdivisions may be part of a string that contains more than one subdivision, LC has decided to add USMARC coding to this documentation, clearly showing how each subdivision should be coded. In addition, subject subdivision authority records, based on a file developed by Gary Strawn, are now being distributed. Authority records are coded to show whether the subdivisions are to be used as form, topic, geographic location, or chronology.

LC’s Cataloging Policy and Support Office (CPSO) is including scope notes in the subdivision records for form and topic to indicate how each subdivision is to be used. As CPSO examines these authority records, they are identifying anomalous practices and taking steps to make the LCSH system more consistent. A statement by CPSO on subdivision authority records, with examples of topical and form subdivisions, may be found on the CPSO home page.

Use of Field 655

Even though the use of field 655 has not been fully implemented by LC, many catalogers are eager to make use of this field and are consistently doing so. The 655 field has been widely adopted in certain areas, such as in cataloging fiction, works of art, and rare books. Catalogers add 655 headings when no appropriate LC subject headings are available or when the form/genre heading supplements assigned LC headings. For example:

100 1 Peacock, Thomas Love,$d1785–1866.

245 10 Nightmare Abbey, 1818/$cThomas Love Peacock.
Headings for the 655 field come from several commonly used thesauri. Among these are GSAFD, used heavily by public libraries for access to fiction, *Genre Terms: A Thesaurus for Use in Rare Book and Special Collections Cataloguing (RBGNR)*, used by rare book catalogers; and the *Art & Architecture Thesaurus (AAT)*, relied on by many libraries and museums. The Library of Congress also applies 655 headings to its cataloging records from at least two supplementary subject heading lists for form/genre terms: the RBGNR and the *Moving Image Genre-Form Guide*. Use of terminology from these lists provides insight into the fact that even catalogers at LC have not been able to reach consensus about the best way to code and provide access to form data.

Music librarians have long complained about the limited access that LCSH provides for music materials, both in its scope of terminology and its inconsistent structure. Even though CPSO has recently improved scope notes for many music headings by indicating the difference between topical and form access, distinctions between works of music and works about music are, at best, obscure.

- works about music **Opera**
- works of music **Operas**
- works about music **Piano music**
- works of music **Piano music**

Because of the limitations of LCSH in providing sufficient topical and form/genre terminology for music, the music library community actively supports an ongoing project to create a music thesaurus.

**Implications of Using Field 655**

Because of the growing number of USMARC bibliographic records that include form headings coded in 655 fields as well as in the unconverted 755 fields, database managers (authority control librarians, etc.) are facing many challenges. These challenges include how to deal with the accumulating mass of 655 headings, how to authorize these headings, how to assimilate headings that come from different thesauri, how to distinguish form headings from LC topical headings, and how to reconcile and lead users to headings that have the same or similar meaning. While many of these challenges exist regardless of whether 655 fields are used, the difficulties are exacerbated by the presence of 655 fields.

Due to limited resources, even those academic institutions that still
attempt to maintain up-to-date Library of Congress subject headings in their catalogs have made little or no attempt to do the same for headings in the 655 field. Most early library systems retrieved the 655 in a keyword search but did not display it as a subject heading string in a retrieval list. With the current generation of library systems, many libraries can choose to have 655 fields searched and displayed via a subject index, and some are experimenting with separate form/genre indexes. At present, however, there is little effort toward merging the various lists or maintaining local headings.

While the GSAFD is considered a great boon to cataloging works of fiction, the British Library Fiction Indexing Group examined this resource and recommended that, to the greatest extent possible, the thesaurus should be harmonized with LCSH. Other thesaurus builders also are considering this and are following the SACO process for proposing their terms as candidates for LCSH. Efforts to coordinate and reconcile headings from various thesauri could significantly affect file maintenance issues. This impact may be greatest among research libraries that have large collections with little turnover. Many public libraries and other libraries that have more frequent turnover are less likely to have a problem with retrospective file maintenance caused by the adoption of multiple thesauri.

The use of multiple thesauri presents the potential advantage of a rich combination of controlled vocabularies developed by specialists in their respective fields. One potential disadvantage for end users, and a primary problem for catalog maintenance, arises when different thesauri use the same established and reference terms differently, possibly even in conflict with each other. Carol Mandel’s seminal 1987 work on multiple thesauri offers a valuable overview of “different approaches to providing access to databases indexed by different vocabularies.” It may be that a combination of mapping between vocabularies and providing enhanced end-user navigation tools will prove more feasible in the long run than attempting to merge all specialist vocabularies into one master list.

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Coding Form Data in Subfield v or the 655 Field?

The question of whether to code form data in subfield v or in the 655 field has generally implied a choice between precoordinated and postcoordinated searching. Precoordinated searching (i.e., searching using cataloger-constructed heading strings) allows users to scan a list of headings, thereby gaining insight into the scope and actual vocabulary of subject headings available. Users are free either to casually encounter topics of interest or to consciously select a topic. By contrast, postcoordinated searching (searching in which the user puts in as many single-concept search terms as apply) requires users to know what they want and how to formulate their queries prior to initiating a search.

Regardless of the type of search employed, the real question at stake is the semantic relationship between the search terms. The subject heading string Agriculture$vStatistics satisfies a subject search in which “agriculture” is the primary focus of the query and the interest in
“statistics” secondary. The seeker of agricultural statistics is not interested in statistics as an abstraction, but rather statistics in relation to agriculture. If the subject headings were *Agriculture* and *Statistics* would the user know that a postcoordinated search must be conducted in order to sift through hundreds of records with the subject heading “Agriculture”? 

The majority of existing systems display single-term and precoordinated strings in one of two ways: as subject heading lists or within individual record displays. While some systems are able to rotate the subject string based on the order of search terms entered, few, if any, are able to return a subject list that matches two or more keywords found in two separate fields, such as 650 and 655. For example, keyword search terms “agriculture statistics” would retrieve the precoordinated strings:

650 Agriculture$\times$Statistics
650 Agriculture$\times$Statistics
655 Statistics$\times$Agriculture [nonstandard construction in LCSH, but possible in other thesauri]

If the strings were deconstructed, and individual terms assigned to separate fields, the same keyword search would not retrieve:

650 Agriculture
650 Statistics
655 Statistics
650 Agriculture

Deconstructing a subject heading by moving one of its elements to another field (as in subfield v to 655) would strip essential semantic information needed by users at the point of searching and could prevent them from obtaining satisfactory search results. As in the examples above, the user is likely to encounter false drops and might easily pass over those records containing the desired link between “agriculture” and “statistics.” Additionally, users would most likely need to perform additional searches and compare search results to find the material they seek.

In summary, the lead term of any subject string, no matter what its subdivision combination, must serve as the primary facet capable of answering a user’s need. Similarly, in light of today’s coding, searching, and retrieval capabilities, a lead term’s complementary parts or phrases are best if appended, or precoordinated, to maintain the intended semantic relationship.

**Conversion of Existing Headings and Subfields**
The question of whether to convert form subdivision data in our existing files from subfield x to subfield v, 755 fields to 655, and later 650 to 655 fields, is a complex issue and has surfaced as something of a “hot button.” The Nature and Use of Form Data Subcommittee recommended against conversion of subfield x at this time. The Library of Congress has indicated that it does not intend to convert its entire file, and bibliographic utilities are also unlikely to attempt global conversion in the near future. Yet, catalogers and authority control librarians who interact with local systems that may now or in the future provide different displays for differently coded strings face the need to reconcile the old and new headings. In some systems, the headings Agriculture$xStatistics and Agriculture$vStatistics (note the change in subfield) will display as two different headings, and in other systems they will be merged. Unless distinctions in use and meaning can be made clear, searchers will be confused by duplicate displays.

Since not all form subdivisions exclusively represent form data, a fully automated approach to retrospective conversion of subject headings will not be possible. As in the example of “statistics,” it will not be possible to instruct a local system or vendor (in the case of outsourced authority work) to uniformly change all occurrences of $x Statistics to $v Statistics and have that conversion be one hundred percent accurate. However, research suggests that at least an initial pass at subfield conversion may be automated with satisfactory results. This type of “blind” conversion would be more successful with those thesauri, such as Medical Subject Headings (MeSH) and AAT, that have identified and consistently use single-concept vocabulary as form or genre, rather than with LCSH, which may use the same term for both topic and form and which employs mostly precoordinated, multifaceted strings.

Use of linked authority systems may produce a mixed bag of results. As LC authority records are updated, linked authority systems are designed to replace all existing headings in local bibliographic records with the updated version of the heading. Like the blind conversion referred to above, this type of one-for-one replacement also can prove to be grossly shortsighted. For example, Mary Charles Lasater, the authorities coordinator at Vanderbilt University, reports that as a result of LC’s updating the headings Technology$xPeriodicals to Technology$vPeriodicals, her local system automatically recoded all instances of the former to the latter version. Hence, regardless of appropriateness, all headings linked to Technology$xPeriodicals were changed to Technology$vPeriodicals, as in:

Technology$vPeriodicals$xBibliography
Technology$vPeriodicals$xDirectories
Technology$vPeriodicals$xIndexes

Lasater reports that in most such cases the subfield for “periodicals” should have remained as subfield x, a topical subdivision.

By contrast, even though LC has recently updated subfield x to v in the heading Shakespeare, William,$d1564-1616$xPeriodicals to Shakespeare, William,$d1564-1616$vPeriodicals, Vanderbilt’s local bibliographic records containing this string remained unchanged. The
headings were unchanged because all local headings are linked to only the name *Shakespeare, William*, d1564-1616.

While each linked authority system may operate differently, most provide the option of automatically changing existing headings with the new version of updated LC authority records. Benefits of global changes clearly exist, but results can prove to be unexpected. There is a trade-off between the convenience of this linkage and the time and effort required to find and correct the inappropriately changed headings.

Other factors that affect decisions about conversion are the capacity of local systems to perform global changes and their ability to fine-tune those changes. For example, can a system change only the last subfield in a string from subfield x to subfield v? Can a system look at fixed field values to help with global changes? Or will libraries need to rely on vendors to make changes and on staff to perform manual review and ongoing maintenance as best they can?

As collections continue to grow and as large retrieval sets become larger, it is important to remember the original intent in implementing subfield v: to create better displays and assist the end user in refining search results. A study by Crawford demonstrates the potential benefits of collapsing large result sets by types of subdivisions (i.e., topical, form, geographical, chronological). Software developers have a long road ahead to catch up with the coding capabilities already available in authority and bibliographic records.

Regardless of whether libraries plan to attempt converting form data found in topical headings and subdivisions, end users will be affected. Can the user trust the search or even know to question the search and its results? Will search results be valid only for new materials and not for older materials? If the local system can index and display 655 fields, can the online system help guide the searcher in choosing which thesaurus to use? In light of all these questions, will implementation have helped the searcher?

**Conclusion**

The full impact of implementation is yet to be realized. The implementation of subfield v by the Library of Congress is only a few months old at this writing, and librarians and online designers are only beginning to recognize and respond to the need to separately index, search, and display data contained in subfield v and the 655 field. The impact on catalogers, however, has already begun. Catalogers need to understand and intelligently employ the distinction between subfield v and subfield x. They must accommodate form/genre headings from a variety of thesauri and consider the implications of whether to provide conversion for legacy headings.

System designers are becoming aware of the need to address indexing refinements, improved searching strategies, and retrieval displays to maximize the use of form/genre content contained in the entire USMARC record. They also are beginning to see the need to

accommodate the possibility that no immediate or long-term retrospective conversion of older headings will occur. As full implementation of both subfield v and 655 by systems and catalogers progresses, further disambiguation of LC terminology and additions to LC terminology also are needed. Lastly, some users will be challenged to understand the distinction between form and topic when that option is available. As always, the role of public-services librarians will be critical in assisting users to maximize the catalog’s search and retrieval capabilities.

The implementation of form data in our catalogs is a team effort. Members of the team include thesaurus builders, system designers, catalogers, public services librarians, and, yes, searchers. At this early point in the game, the team is thriving and is steadily advancing toward its goal line: improved access to form data in online catalogs.

References and Notes

1. Subject Analysis Committee, Subcommittee on Subject Access to Individual Works of Fiction, Drama, etc., Guidelines on Subject Access to Individual Works of Fiction, Drama, etc. Chicago: ALA, 1990. (A revised edition is scheduled to be published in 1999.)


4. Subject Analysis Committee Subcommittee on Nature and Use of Form Data, “Recommendations on Form Data to LC.” http://www.pitt.edu/~agtaylor/ala/form-rec.htm
   For information on discussions leading to the elimination of USMARC Bibliographic field 755, see: Association of College and Research Libraries, Rare Books and Manuscripts Section, Bibliographic Standards Committee; ALA, Subject Analysis Committee, “Discussion Paper No. 82, Merging Field 755 with Field 655 in the USMARC Bibliographic Format.” http://lcweb.loc.gov/marc/marbi/dp/dp82.html
Association of College and Research Libraries, Rare Books and Manuscripts Section, Bibliographic Standards Committee; ALA, Subject Analysis Committee, “Proposal 95-10: Making field 755 obsolete in the USMARC Bibliographic Format.”
http://lcweb.loc.gov/marc/marbi/minutes/an-95.html


6. For information on discussions leading to the establishment of subfield v, see:
   Meeting minutes re Discussion Paper 79:
   http://lcweb.loc.gov/marc/marbi/minutes/an-94.html
   http://lcweb.loc.gov/marc/marbi/minutes/mw-95.html

7. This idea was articulated at least as early as Discussion Paper 74 (see note 6 above).

http://www.pitt.edu/~agtaylor/ala/lcrep97.htm
   Library of Congress Reports on Form/Genre Implementation:
   http://www.pitt.edu/~agtaylor/ala/implem.htm


13. See for example: David Miller, “Identical in Appearance but Not in Actuality: Headings Shared by a Subject Access and a Form/Genre Access Authority File.” Library Resources and Technical Services 41, no. 3 (July 1997): 190–204.


15. See note 3 above.
