UCLA

UCLA Previously Published Works

Title

Faceted Vocabularies for Music: A New Era in Resource Discovery

Permalink

https://escholarship.org/uc/item/3c94h02d

Journal

Notes, 73(3)

ISSN

1534-150X

Authors

Iseminger, Beth Lorimer, Nancy Mullin, Casey et al.

Publication Date

2017-03-01

Peer reviewed

Faceted Vocabularies for Music: A New Era in Resource Discovery¹

Beth Iseminger, *Harvard University*

Nancy Lorimer, Stanford University

Casey Mullin, New York Public Library

Hermine Vermeij, University of California, Los Angeles

The new faceted music vocabularies, the *Library of Congress Medium of Performance*Thesaurus (LCMPT)² and the music portions of the *Library of Congress Genre/Form Terms for*Library and Archival Materials (LCGFT)³, are long-anticipated products in a history of problemsolving approaches toward descriptive terms for music. These approaches have evolved from the
early days of modern music librarianship through more recent efforts to establish a thesaurus of
music terminology. MLA's Cataloging and Metadata Committee has collaborated with the
Library of Congress for the past several years in a multi-phase endeavor to design and build out
these new vocabularies. A detailed account of this endeavor, as well as challenges for
implementation of the vocabularies in library metadata, will be discussed.

History

The early work on music subject headings took place in the print-only environment of card catalogs and reference sources, which ultimately forced decisions about entry points in the catalog. Should musical works be listed primarily under their form or their instrumentation? The answers could vary according to the type of use, research, or performance, for example. In the card catalog, form typically won over medium of performance, because all works have a medium, while form provided a more specific qualifier.⁴

Consistency was a major concern in early subject analysis. Librarians sought uniformity in subject terminology across libraries, particularly in terms of heading construction. A standard print list could also serve as a training tool, to assist catalogers in applying headings for specific subjects with which they were not as familiar. In 1933, the Music Library Association (MLA) compiled such a list of subject headings based on Library of Congress catalog cards, and in 1935, the Library of Congress (LC) published a list of subject headings for books about music. These endeavors provide early illustrations of how music librarians conceived of a music thesaurus as a set of descriptors that would include headings applicable to all types of musical resources.

The 1980s and 1990s: Towards a Music Thesaurus

The advent of computer technology, online catalogs, and database tools provided an impetus for developing more fully structured music vocabularies. Inspired by the success of the Art and Architecture Thesaurus (AAT) sponsored by the Getty Research Institute, as well as the well-designed RILM Thesaurus, MLA formed the Music Thesaurus Project Working Group in 1985. The group envisioned a comprehensive thesaurus covering the entire discipline of music that could be used not only in cataloging all formats of music materials for libraries, and for book and periodical indexing.⁷

Following the report of the Working Group in 1989, Harriette Hemmasi (then music librarian at Rutgers University; currently University Librarian at Brown University) began development of a prototype music thesaurus in 1991 with Dr. James Anderson and Fred Rowley, through a grant from the Council on Library Resources. Anderson and Rowley had created a thesaurus construction software program ARIS (Anderson Rowley Information Systems), which was used for the project. Hemmasi identified 12,000 LCSH⁸ music terms, taken primarily from

the Soldier Creek Press publication *Music Subject Headings*, ⁹ and converted them to the format used in the thesaurus software; this allowed more sophisticated manipulation, re-organizing, and representation of terms in various ways. ¹⁰ She began with five facets for use in the thesaurus, and through her modeling of the first test category (vocal music), refined her list to include the following facets: agents, events, forms/genres, geo-cultural attributes, sound devices (currently referred to as medium of performance), texts, and other topics. A major development of Hemmasi's work was her deconstruction of LCSH terms into above facets. As opposed to a precoordinated system, in which terms from varying facets are combined into a single string, Hemmasi's faceted approach allowed more focus on the structural organization and navigation of terms. ¹¹ The goal of Hemmasi's music thesaurus prototype was to help users move through the vocabulary to broader or narrower terms, or to reformulate their search based on terms discovered through the built-in syndetic structure. ¹²

At this time music specialists from the Library of Congress were also interested in developing better subject access to music materials. In 1993, the LC Music Subject Group published a proposal that sought efficient, cost-effective improvements to music access. ¹³ In the proposal, the group's identification of three main facets (form, medium, and genre) and their emphasis on a simple and direct approach to vocabulary generation mirrors the work that would eventually be done by the recent MLA and LC groups (MLA's Genre/Form Task Force and Vocabularies Subcommittee, and LC's Music Genre/Form Project Group) to build LCGFT and LCMPT, respectively. The 1993 LC Music Subject Group proposed using a single MARC field (654 Subject Added Entry-Faceted Topical Terms), with subfields for form (a), medium (b), number of similar instruments (n), and total number of instruments (t). Terms were meant to come from the Music Thesaurus and would be listed in singular form with no prescribed order

for instruments. Genre terms would be given in the MARC 655 field (Index Term-Genre/Form). ¹⁴ While this proposal bears a striking resemblance to the final outcomes of the LCGFT and LCMPT projects, the proposal differed in its separation of form and genre into different fields: form in the MARC 654 field and genre in the MARC 655 field.

These projects and proposals demonstrate how over nearly the last century music librarians have worked toward some sort of structured access. In her article "The Music Thesaurus: Function and Foundation," Harriette Hemmasi quoted Helen Bush and David Haykin in their praise of a structured catalog with ample cross references. What Bush and Haykin wanted, what the Music Thesaurus Working Group and Hemmasi as developer of the Music Thesaurus wanted, and what the current projects have endeavored to create are the same: a shared, faceted vocabulary complete with hierarchical organization, syndetic structure, and abundant cross-references.¹⁵

Current Vocabularies: Library of Congress Genre/Form Terms for Library and Archival Materials (LCGFT) and Library of Congress Medium of Performance Thesaurus (LCMPT)

Strong institutional support is a requirement for successful implementation of new vocabulary ventures, as seen in the example of the AAT. While LC music specialists demonstrated their interest in the Music Thesaurus and attempted to garner broad support for the project, the Music Thesaurus eventually became a matter of historical interest rather than an ongoing project. A turning point for faceted vocabulary development came in 2007 with the announcement that the Library of Congress, Policy and Standards Division (then the Cataloging Policy and Support Office) would create LC-sanctioned genre headings. Initially the intention

Entry—Topical Term) field to MARC 655 (Index term—Genre/Form) field, but the project quickly developed into a more elaborate vocabulary building initiative. ¹⁶ The LC genre thesaurus work began in the realm of moving images, television programs, and videos, with terms drawn from the *Moving Image Genre Form Guide* (MIGFG) represented by a small test set of terms. This was followed by the addition of genre terms for radio programs, and in 2008 LC announced a five-year plan for adding genre terms in the areas of law, music, cartography, religion, and literature. In 2010, LC announced the formation of the *Library of Congress Genre/Form Terms for Library and Archival Materials* (LCGFT), a thesaurus for genre and form terms separate from LCSH. Having the support of the LC Policy Office meant that the new thesaurus was positioned for success and widespread adoption, since libraries around the country would likely follow LC's lead in use of the new vocabulary. ¹⁷

Music librarians rightly recognized the beginning of LC genre development in 2007 as the opportunity they needed to finally develop faceted terms applicable to music scores and recordings with the support of a respected and powerful national agency. In 2009, members of MLA's Cataloging and Metadata Committee (then Bibliographic Control Committee) agreed to work with Geraldine Ostrove of LC-PSD (the Library of Congress' Policy and Standards Division) and other music specialists at the Library of Congress to generate the music portion of LCGFT. Further details of the collaboration between MLA and LC will be discussed in upcoming sections of this paper.

Problems with Library of Congress Subject Headings (LCSH) for Music Resources

While LCSH remains the dominant tool for describing music resources, it is fraught with problems. The vast majority of music headings in LCSH are not subjects at all, but rather a combination of genre, form, medium of performance, and other aspects that tend to describe the "is-ness" of a musical work rather than the "about-ness." For example, the subject heading Grindcore (Music) describes a genre; Sonatas describes a form, and Bassoon and harp music describes an instrumental combination (a type of medium of performance). Musical formats also make an appearance in LCSH, usually in subdivisions (e.g., --Scores and parts). Conversely, subject headings for works about particular types of music exist as well. Changes in practice over the years have confused these to some extent: the older practice was to use the singular (e.g., **Sonata**) for works *about* a musical form, and use the plural (e.g., **Sonatas**) for examples of that form. More recent practice uses the subdivision --History and criticism after a genre/formtype heading to denote "about-ness" (e.g., Grindcore (Music)--History and criticism). There are also genuine topical subject headings to be used for musical works that have a specific topic, e.g. Birds--Songs and music. This co-mingling of topical and non-topical terms in a list of subject headings is not ideal; it has long been a recognized problem.¹⁹

Beyond the problem of "is-ness" versus "about-ness," LCSH for music presents a number of other conundrums. First, genre/form and medium of performance are often conflated into one term, and not always in a predictable way (e.g., Sonatas (Violin and piano); Guitar music (Flamenco); Cantatas, Sacred (Equal voices)--Vocal scores with organ). Other aspects that cannot be defined as subject, genre/form, or medium of performance are also incorporated into pre-coordinated subject headings, including geographical origin (e.g., Punk rock music-Mexico), time period of creation (e.g., Symphonies--18th century), creator characteristics (e.g., African Americans--Music), and audience characteristics (e.g., Children's songs) This makes

it difficult to pull out the disparate facets of a work, especially for an online system attempting to parse subject heading strings.

Additionally, LCSH generally does not provide adequate access to medium of performance. Because the subject headings are pre-coordinated text strings (or, individual instrument, voice, or ensemble terms are not indexed in a manner able to be parsed by machines; they may be accessed by keyword or subject browse searches, however. It is not feasible, using subject headings, to construct a search for a combination of instruments and/or voices (a common user task encountered in music libraries²⁰) and retrieve a full set of results. A user might expect that the heading Flute and piano music would retrieve all works written for the combination of flute and piano; however, the headings Sonatas (Flute and piano) and Suites (Flute and piano), as well as a host of other genre/form/medium combinations would also need to be searched to recall a complete set. Searching music resources by medium becomes more complicated when performing groups grow larger: the Subject Headings Manual contains voluminous instructions on how subject headings for chamber music should be formed, including the order of instruments, illustrated by this particularly egregious example: Nonets (Bassoon, flute, horn, piccolo, trombone, trumpet, viola, cello, double bass). There are so many conceivable combinations of instruments that not all possibilities are provided with authority records in LCSH—which bodes poorly for a future when libraries may rely on Linked Data²¹ as a source of authorized identifiers. Sometimes LCSH does not record the medium of performance at all; rather it relies on the user to infer it (e.g., Symphonies, for which the medium of performance "orchestra" is inferred unless otherwise specified). Historically, the Library of Congress Classification M schedule has done a better job of collocating music for particular instrumentations, ²² hence the tradition of music libraries often being browsing

collections. But as we are now well-entrenched in the digital age, it seems that we should have a better way of indexing musical works by the performing forces needed to realize them.

Rationale for Faceted Access to Music

Increasingly, faceted searching is being seen as an improvement over other information retrieval systems, and has become prevalent both in library contexts (e.g., discovery layers, next-generation library public catalogs) as well as online retailers and other mass-market websites with large databases (e.g., Amazon, Zappos). Faceting allows users to apply filters to a database, often after retrieving an initial set of search results, with each filter tied to a facet, or a distinct aspect. This strategy is more user-friendly than traditional "advanced searches," because users can elaborate queries progressively, rather than constructing an elaborate set of limits from the start. As a result, faceted searching provides greater precision than a simple keyword search.²³

Faceting relies on good metadata; to perform well, each facet should be distinct and populated with terms from a controlled vocabulary. ²⁴ Bibliographic information is ideal for faceting as long as the discrete facets can be teased out. It makes sense to offer users facets such as format, date of publication, language, and topic for most types of resources usually available in a library catalog. Several of the facets that are useful for finding and identifying music materials in particular have already been identified: genre/form, medium of performance, format of music, geographical origin, date/time period of creation, creator characteristics, and audience characteristics. Other important facets include numeric designation, key, and language. The type of faceting currently in use in many library systems often does not work well with music subject headings for the reasons described in the preceding section, namely, that the subject headings

conflate multiple facets in ways that search software cannot easily separate. Systems also cannot detect when music subject headings are topical or when they are acting as genre/form terms; subject headings are generally displayed in a "topic" facet, which can be confusing for users.²⁵

To successfully implement a faceted system, the separate facets need to be designated in a way that machines can understand. As discussed earlier, a faceted system was first attempted by Harriette Hemmasi and others in the 1980s and 1990s, ²⁶ but technological innovations and the Library of Congress's cooperation today have made it possible to finally put these ideas into common practice.

Collaboration Between the Library of Congress and the Music Library Association

To address the problems with LCSH and move toward a faceted environment, the Library of Congress with input and cooperation from various library groups has been developing three vocabularies that are meant to improve specificity and successful searching for users. The vocabularies, the *Library of Congress Genre/Form Terms for Library and Archival Materials* (LCGFT), the *Library of Congress Medium of Performance Thesaurus* (LCMPT), and the *Library of Congress Demographic Group Terms* (LCDGT), provide more precise access to genre/form, medium of performance, and demographic terminology. They follow ANSI/NISO standard Z39.19-2005, *Guidelines for the Construction, Format, and Management of Monolingual Controlled Vocabularies* as much as possible, and they each provide varieties of relationships such as equivalence (UF, Used For), associative (RT, Related Terms), and hierarchical (BT, Broader Term, and NT, Narrower Term) relationships. Each vocabulary is unique in hierarchical structure.²⁷ As of January 2016, LCGFT includes over 1800 terms

(including music and the other disciplines represented in the thesaurus), LCMPT includes 827 terms, and LCDGT includes over 800 terms.²⁸

Geraldine Ostrove, Music Specialist at LC's Policy and Standards Division (now retired), has written and studied extensively on the issues surrounding subject access to music, describing LCSH, its application, and its problems for resources containing printed and recorded music. Early in LC's exploration of the possibilities of access using genre/form, Ostrove suggested that help from librarians beyond LC would be necessary to successfully approach a full-scale genre project, especially relating to music where so many potential genre/form terms were part of pattern headings that had never been established in the subject authority file, initially the base for drawing out genre terms from LCSH.²⁹ After a year of discussion between Ostrove (on LC's behalf) and various members in MLA, an agreement was reached in February 2009 for cooperation on a genre project for music, and the MLA Genre/Form Task Force was formed a month later. A Music Genre/Form Project Group was also formed at LC, and the two groups have collaborated both online and in person at conferences throughout the duration of the two projects.³⁰ The MLA Genre/Form Task Force initially was responsible for MLA's contributions to both genre and medium of performance vocabulary development, but in 2011, medium of performance work was transferred to the MLA-CMC (Cataloging and Metadata Committee) Vocabularies Subcommittee (then Subject Access Subcommittee) so that work could be distributed between two MLA groups with the goals of a more expedient and more focused product for each project.³¹

During the time that LC and MLA were discussing potential collaboration, LC was beginning to realize that their initial approach—simple conversion of subject coding to genre coding (changing MARC 650 fields to 655 fields)—was not going to provide the kind of robust

syndetic structure a new vocabulary should have. As the LC-MLA collaboration began, both groups understood that an essential step would involve separating music LCSH strings that combined multiple facets (genre/form, medium of performance, language, etc.) into their component parts. Another crucial decision was identifying the importance of medium of performance for access to musical works and realizing that it should somehow be separate from existing vocabularies (LCSH and LCGFT). In the early stages of the project, the final location of the medium of performance terms was unclear. MLA was particularly concerned about this uncertainty, and in developing the timeline for project work, the Task Force agreed to focus particularly on medium terms.³² By 2012, LC and MLA had agreed that medium of performance terms should reside in a separate faceted vocabulary³³ and in February 2014, LCMPT was launched.³⁴

The MLA Genre/Form Task Force began work by processing lists of music LCSH terms compiled by Ostrove and by identifying which terms belonged in the genre/form and medium categories. The definitions for genre and form were taken from the *New Grove Dictionary of Music and Musicians, 2nd ed.* with genre defined as "a class, type, or category, sanctioned by convention," and form as "the constructive or organizing element in music." The definition for medium of performance was taken primarily from the *Functional Requirements for Authority Data* and referred to the performing forces of a work, including individual instruments and/or voices, instrumental and/or vocal ensembles, and other objects used to perform musical works.³⁷

The initial LC lists included medium "phrases" in the genre/form list (including medium and ending with the term "music", such as **Piccolo and piano music.**) MLA decided to move these terms to the medium list prior to processing and soon proposed eliminating that type of phrase construction for medium altogether. After categorizing the initial LC lists and suggesting

any deletions, the Task Force added any terms missing from the lists. The next step was to review sources outside of LC, identify genre/form and medium terms from these sources that were not present and add them to the lists, and then vet the lists for consistency and clarity. After MLA and LC agreed on the full lists, the groups worked together to identify broad hierarchical categories (art music, dance music, dramatic music, folk music, jazz, instrumental music, popular music, sacred music, songs, vocal music, and world music) and expand the hierarchies with the agreed-upon terms. The final step was creating authority records for the genre/form and medium of performance terms.³⁸

One step in this process was not fully brought to fruition: that of vetting the lists of terms from outside LCSH³⁹ and incorporating them into the new vocabularies. There were several problems with the external sources; one example, the *Garland Encyclopedia of World Music*, often provided multiple identifications of genres and instruments that expanded the lists exponentially, including contradictions in spelling and definition for the same term. ⁴⁰ Perhaps, in looking at so many terms beyond LCSH, the Task Force was hearkening back to the still recent Music Thesaurus Project and the desire for completeness and a comprehensive music vocabulary resource. The Task Force was evidently influenced by the desire to fill in gaps in the vocabulary that had plagued LCSH for some time (for example, certain areas of world and popular music as well as certain types of medium of performance). However, the LC faceted vocabulary projects are focused on the practical; that is, literary warrant was a required guiding principle, meaning that a term had to apply to an existing resource held by libraries to be included in the vocabulary. While this is an advantage in terms of practicality, it can be a weakness in achieving comprehensiveness and syndetic structure. ⁴¹ It is hoped that the lists of "extra" terms from

outside LCSH (still on the Task Force's wiki) can someday be reviewed and important terms extracted and added to LCGFT and LCMPT.

Cross-organizational collaboration was key to the success of the music genre/form and medium of performance projects. Neither MLA nor LC would likely have been able to build such full music vocabularies alone, especially in the relatively short amount of time it has taken to publish LCGFT for music and LCMPT. To quote Task Force member Mark McKnight (University of North Texas), "The Genre/Form Project for music has been a model of cooperation--between the two collaborating groups as well [as] among task force members."

Library of Congress Genre/Form Terms for Library and Archival Materials (LCGFT)

The majority of genre/form terms for music were derived from headings culled from LCSH by Geraldine Ostrove. On a basic level, they tend to look much like their LCSH counterparts. **Rock music, Blues (Music),** and **Operas**, for example, are the same in both vocabularies. In other cases, headings taken from LCSH required manipulation to make them work within the kind of syndetic structure required for LCGFT.

LCSH, unlike LCGFT, is not a true thesaurus. A large number of LCSH headings do not have broader term (BT) relationships, a requirement for thesaurus structure. Also, BTs for many headings may conflict with one another. Violating these principles of thesaurus structure creates problems of exclusivity (broader terms must apply to their narrower terms all of the time, not only in certain examples) and of non-equivalence (multiple broader terms assigned to the same narrower term must be equivalent with each other.) For instance, in LCSH, the heading **Motets** has two BTs: **Part songs** (defined as exclusively secular music) and **Part songs**, **Sacred** (defined as exclusively sacred music). While a motet may indeed be either secular or sacred,

using both BTs for **Motets** does not meet the exclusivity requirement. Another problem with **Motets** example is that the BTs, **Part songs** and **Part songs**, **Sacred** are more opposite to each other than they are equivalent. The Task Force worked diligently to fit the new LCGFT terms into a structure complete with broader terms for all those not at the top level, and to resolve conflicts among BTs assigned in LCSH to the same term.

Another thesaurus principle which was problematic with the converted LCSH terms was that of compatibility: narrower terms for the same broader term should not conflict. Adhering to this principle meant that terms comprised of simple combinations of broader terms had to be decoupled and possibly eliminated from the new vocabulary, since they introduce restrictions that cause conflicts for their narrower terms. For example, Sacred songs was a combination of Sacred music and Songs, and was not included in LCGFT due to compatibility conflicts between its narrower terms. Musical works formerly assigned this LCSH heading will now receive two genre terms—Songs and Sacred music. A select number of compound terms were retained, either because the terms are so prevalent in everyday speech (e.g., Folk songs) or because splitting the term would have changed the meaning. For instance, Folk dance music is music intended for folk dances. If the term had been split into "Folk music" and "Dance music" it would have violated the exclusivity principle, implying that all folk dance music is folk music, which is not the case.

As discussed previously, the Task Force reviewed terms from sources outside LCSH for inclusion in LCGFT, but those terms were often abandoned in the interest of completing the project. There were exceptions, however, including terms that filled in a missing part of the syndetic structure. These were primarily high level terms: for example, **Teaching pieces**(Music), Notated music, and Event music—all additions necessary to complete the hierarchy.

The most significant addition, structurally and culturally, of a high level term to LCGFT was **Art music**. In LCSH, the term **Music** refers to all music in general and specifically to Western classical music; by default, anything is Western classical music unless defined otherwise. 44 Structurally, this is permissible in a thesaurus for instances at lower levels in the hierarchy, but it does not work when dealing with the highest level term in the thesaurus (here **Music**). The lack of a general term for art music also could result in a long-term, if now dwindling, practice of categorizing all music outside of Western classical or art music as folk music, even when a culture's art music tradition was well-documented. The Task Force was determined from the beginning to correct this bias as much as possible. The term **Art music** was chosen to represent court, classical, and art music from any culture and is at the same level in the thesaurus hierarchy as **Folk music** and **Popular music** as an NT of **Music**. The scope note for **Art music** specifically restricts use of the terms Art and Folk music to those cultures that recognize the distinction, in order to not impose any inappropriate cultural models.

Other terms added to LCGFT included new headings in LCSH that could also be genre terms (emanating primarily from popular music genres) and terms resulting from the splitting of some LCSH headings. One type of heading in LCSH that the Task Force referred to as "etc. terms" was split into constituent parts. Thus Canons, fugues, etc. became the three separate terms Canons (Music), Fugues, and Preludes (Music). In other instances, the splits were the result of longstanding frustration with terms. Studies and exercises was often easy to confuse with Concert etudes in LCSH practice. In LCGFT, Studies and exercises was subdivided into Studies (Music), with a BT of Teaching pieces (Music) (which is itself one of the broadest terms under Music). Concert etudes was given the BT Art music, which is also a broadest term

under **Music**, thereby dividing the related but differing genres of **Studies and exercises** and **Concert etudes** into different parts of the hierarchy.

Defining Genre: Compromises Made for Certain Types of Historical Genre Terms

Besides the challenge of fitting music genre terms into a hierarchical structure, and finding adequate references for each term, the Task Force found that defining what is and what is not a genre/form could be difficult. The Library of Congress initially had a fairly restrictive working definition of genre, and a number of the terms from LCSH that the music community had long been in using as genre/form terms did not always seem to fit that definition. The Task Force debated the value of consistency in the vocabulary versus library users' expectations in finding resources, and the results are demonstrative of this dichotomy. ⁴⁵ Perhaps the terms in question fit better with LC's updated definition of genre. ⁴⁶

The largest group of terms affected in this discussion were terms named for the text that the music supported, which most often were in the category of sacred music. Examples include **Alleluia (Music)** and **Magnificat (Music)**, which are included in LCSH but not in LCGFT. A special example of this issue are psalm texts set to music. In LCSH, individual psalms are named in form subdivisions attached to the main heading **Psalms (Music)**, which is a unique pattern even in LCSH.⁴⁷ A compromise was made in this case to better meet the needs of musicians, who were accustomed to finding musical settings of psalms using the LCSH heading. While the names of individual psalms are not part of LCGFT, the general term **Psalms (Music)** is included. Other terms with similar issues such as **Requiems** were also included in LCGFT.

Similarly, there was extensive discussion about various terms applied as genre/form terms in the past, but now seemed to be more topical in nature. The terms most affected by this issue are song types such as LCSH terms **Protest songs** and **War songs** that are not included in LCGFT. An even more problematic example of this type of term is the LCSH term **Topical songs**. Decisions on these terms have been mixed, for example, **Love songs** was accepted in LCGFT, but **Death songs** and the others cited were not, and they remain questionable. These lingering concerns are being resolved on a term by term basis.

One term from LCSH that has so far confounded definition is **World music**. Initially created by the music marketing industry, the term is ubiquitous found in the titles of books for undergraduate teaching, in the names of festivals, and in classifying several types of music. The Task Force found, however, that there does not seem to be one definition of world music, except at such a broad level as to render it useless as thesaurus term. The Task Force also conceded that the required literary warrant for including the term in LCGFT did not seem to be present, except for warrant based on the most general definition of the term. **World music** is therefore not currently present in LCGFT.

Library of Congress Medium of Performance Thesaurus (LCMPT)

Although the terminology for LCMPT came chiefly from existing LCSH terms, the finished terms look less like their corresponding LCSH headings than genre/form terms do.

LCMPT terms are generally lower-case and in the singular. In LCSH, the heading **Bassoon** is used for works about the bassoon; the heading **Bassoon music** is used for music for solo bassoon; and the terms "bassoon" and "bassoons" appear in various types of headings, depending

on whether the piece includes one or more than one bassoon (e.g., **Trios** (**Bassoon**, **clarinet**, **cello**); **Suites** (**Bassoons** (2)). In LCMPT, the sole term **bassoon** represents the instrument, and the number of performers needs to be recorded elsewhere.

Because LCSH is not a thesaurus, ⁴⁸ and does not have a pure hierarchical structure, the group working on developing LCMPT needed to make some significant adjustments to the syndetic structure. For the instrument hierarchy, we found the Sachs-Hornbostel classification⁴⁹ very useful to fill in some gathering terms. For example, in LCSH the heading **Flute** represents the Western transverse flute, but it also acts as a broader term for a variety of other flutes, including **Bānsurī** and **Penny whistle**. We wanted to avoid this practice in LCMPT as much as possible; in LCMPT the term **flute** has the same scope as in LCSH (the flute of European art music), but it is a broader term only to its derivative instruments (alto flute, bass flute, contrabass flute, flûte d'amour, and piccolo); the Sachs-Hornbostel terms ductless flute and duct flute act as broader terms for the other types of flute. Additionally, many vocal terms are not fully integrated into the syndetic structure of LCSH. For example, the term "high voice" appears in hundreds of different LCSH headings, but there is no authorized heading for "high voice" alone (and therefore no broader term or other hierarchical structure); there is only an instruction within a complex "see reference" to use it in a parenthetical qualifier with other terms (e.g., **Songs** (**High voice**)). For LCMPT, all vocal terms into the hierarchy under the top term voice. The LCMPT term high voice has the broader term singer and three narrower terms: child soprano voice, soprano voice, and tenor voice.

In some cases the scope of terms needed to be changed. This was especially true for ensemble terms. In LCSH the scope of many headings with the structure "____ ensembles" is context-sensitive, with the definition changing depending on whether the resource being

cataloged is a single work or a collection of works, and also whether the ensemble is the main attraction or if it is accompanying a solo instrument. Adding to the confusion, in many cases there are two LCSH headings describing the same type of instrumental ensemble, with the distinction being that one heading is for instruments playing one-to-a-part and the other for instruments playing two- or more-to-a-part. Take the example of the LCSH headings Clarinet ensembles and Clarinet choir music: Clarinet ensembles is scoped to be used with compositions for ten or more solo clarinets and collections of compositions for various numbers of solo clarinets, or, when used for an accompanying ensemble, for two or more solo clarinets. Clarinet choir music is scoped to be used with compositions for clarinets playing two or more to a part. We wanted to avoid scopes that changed depending on the context. After some analysis of the WorldCat database, we also determined that many composers do not specify the number of players to a part, and often catalogers seemed to be applying the two different types of ensemble terms indiscriminately. So we made the decision to offer up the " ensemble" terms with only one scope: "An ensemble of two or more ______s." This allows for backwards-compatibility (the scope of two or more means that those "accompanying ensembles" of only two instruments can still be defined as ensembles in LCMPT) and flexibility for catalogers, who, despite the greater granularity available with LCMPT terms, may wish to find a more general term to describe tricky resources.

In a few cases, we added terms to LCMPT that are not present in LCSH. Sometimes this was to add more specificity: for example, in LCSH the term **Saxophone** has no narrower terms; "Alto saxophone," "Baritone saxophone," and the other voices are upward cross references. We determined that the different voices of saxophone are important enough to each have its own LCMPT term. Other terms were added because they can be important performing forces in

newer music, but had never been added to LCSH, like **visuals**, **vocal percussion**, and **signer** (LCMPT term for a performer using sign language).

We knew that coding LCMPT terms, both in the MARC Format and beyond, would be a difficult proposition. Unlike genre/form terms, which can generally be post-coordinated fairly easily, medium of performance terms require context to be useful. The term **violin** applied to a musical work might only make sense for a solo violin piece. Additional information would be required to create a full medium statement, such as: How many violins are needed? And what other instruments, voices, or ensembles are required to perform this work?

Over a series of MARC discussion papers and proposals in 2012 and 2013, MLA and the Library of Congress expanded the MARC 382 (Medium of Performance) field to add subfields for aspects such as the number of performers of the same medium, the total number of performers, soloist designation, doubling information, and alternate instruments; on and created a new set of fields in the MARC Authority Format to accommodate the new LCMPT authority records: 162, 462, and 562. The 382 field has received a few more refinements in 2015 and 2016, as catalogers put it into use and discovered they needed to be able to code more information about the number of ensembles.

LCMPT has been implemented for about two years at the time of this writing, and the feedback has been chiefly positive. However, there are a few concepts that LCMPT does not express very well, and which could be improved in the future. One of the questions we receive most often is, "What happened to string quartets?" Early in the process we had trouble deciding where string quartets fit in—is it a genre/form? Not really; it only describes the instrumentation. Is it an ensemble? Yes, sort of, but we felt it was more important to give access to the specific

instrumentation (2 violins, 1 viola, and 1 cello), so the actual term "string quartet" does not appear in LCMPT. It is possible that future systems will be advanced enough to make connections between the instrumentation and the term, but we are not there yet. Another widely-lamented shortcoming of LCMPT is how it deals with single instruments played by multiple people--the most common example of this situation is piano 4 hands. In LCSH there are many terms for various numbers of pianos played by various numbers of hands. There is a clear distinction between, for example, **Piano music (4 hands)** (music for two performers at one piano) and **Piano music (Pianos (2))** (music for two performers at two pianos). After extended hand-wringing, no one could come up with a good solution using LCMPT and the 382 coding that could sufficiently explain such situations, so the current best practice is to record that aspect (number of hands) in a note.

Despite these issues where there is room for improvement, LCMPT enables significantly better access to medium of performance information than was possible in LCSH. In combination with other vocabularies, it opens to door for true faceted access to music.

Library of Congress Demographic Group Terms (LCDGT) and Beyond

Given that these new faceted vocabularies are intended to replace LCSH as the preferred method for describing what resources are (in contrast to what they are about), LC determined that an additional vocabulary was needed to describe characteristics of creators, contributors and intended audiences. Such attributes are out of scope of LCMPT and LCGFT. Deciding that LCSH itself, while possessing numerous headings for classes of persons (e.g., occupational, gender, religion and age groups, to name a few) was not suitable for use in a fully-faceted

environment, the *Library of Congress Demographic Group Terms* (LCDGT) was initiated. LC announced the new vocabulary in May 2015⁵⁴, and has undertaken a multi-year endeavor to build it out, incorporating community input and new term proposals in a multi-phase pilot project. While the vocabulary is still under development, terms already in the vocabulary are available for implementation. So, a resource described by the LCSH heading **Piano music-- Juvenile** can be assigned the LCDGT term **Children** when designated in the appropriate metadata element for audience characteristics (in MARC, field 385 is used for this purpose).

Still other attributes described historically with "subject" headings will need to be encoded elsewhere in bibliographic metadata. These include geographic origin, time period of creation, and language. Fields and codes are defined in MARC for these attributes, and practices for their use are quickly evolving. Special thesauri may not be needed, however, given the availability of existing code lists and other sources of authorized names such as the LC National Authority File.

Implementation: Current and Retrospective

Second only in complexity to the herculean task of developing the vocabularies themselves is the manifold effort to facilitate and advocate for broad implementation of the vocabularies in library metadata. Implementation in this sense can be described in two components: current and retrospective. Current implementation involves the manual assignment of faceted vocabulary terms in bibliographic and authority metadata by catalogers describing music resources in their everyday work. Retrospective implementation involves the remediation of legacy metadata, adding faceted terms opportunistically, within the limits of programmatic possibilities. Both of these components are described below.

Current implementation of LCGFT and LCMPT has been rapid and enthusiastic among music catalogers in the Anglo-American community. This is thanks in part to release of best practices documents by the Music Library Association's Cataloging and Metadata Committee. The document *Provisional Best Practices for Using LCMPT* was released on April 7, 2014 (less than two months after the release of LCMPT) and re-released in a slightly corrected version on May 16, 2014. A significantly revised and expanded version of this document, re-titled *Best Practices for Using LCMPT*, was released on February 22, 2016. The parallel document for LCGFT, *Best Practices for Using LCGFT for Music Resources, Version 1.0*, was released on June 8, 2015 (just four months after the initial release of LCGFT music terms), and re-released in a slightly corrected version on June 21, 2016.

Although these documents do not cover every possible situation in exhaustive detail, they provide guidance for many situations commonly faced by music catalogers. Moreover, they encourage implementation of these vocabularies in a manner that takes full advantage of their faceted, explicit, and granular nature. Inspired in part by LCSH practice, they do not attempt to emulate it. For example, a work of art music that is not of a particular genre or form (e.g., a single-movement piece for orchestra) would be assigned the term **Art music**, the most specific term available. Conversely, under LCSH, this resource would be assigned the subject heading **Orchestral music**, with the art music aspect implicitly assumed by the user. In another example, a work for an ensemble of 15 instrumentalists can be described with as many LCMPT terms as are necessary to sufficiently identify the composition of the ensemble. Conversely, under LCSH, an upper limit of 9 players is observed, with ensembles of 10 or more players being described using a generic ensemble term.

In addition to promulgating best practices, members of MLA's Genre/Form Task Force and Vocabularies Subcommittee have given numerous presentations and training sessions in the years since the endeavor began. Most noteworthy among these were a half-day workshop given to attendees of the Music OCLC Users Group (MOUG) 2015 Annual Meeting in Denver, Colorado⁵⁷, and an ALA/MLA-co-sponsored webinar in October 2015⁵⁸. Response to these events has been enthusiastic, as has the overall level of engagement from members of the music cataloging community regarding the availability of the new terms and potential for their full exploitation, as evidenced by frequent and robust discussions on e-mail lists such as MLA-L and MOUG-L. With this and with the appearance of the new vocabulary terms in recently created and upgraded bibliographic records in OCLC WorldCat, the authors conclude that a preponderance of music catalogers in the Anglo-American community have embarked upon current implementation.

Retrospective implementation is another matter entirely. Manual remediation of older bibliographic and authority metadata to incorporate the new faceted vocabulary terms would be a daunting endeavor, involving at a minimum hundreds of thousands of records. Even if this work were distributed among a small army of catalogers working in a shared database such as OCLC WorldCat, the time, effort, and coordination required to undertake such a project would be prohibitive, and come at a great cost for individual libraries, many of which are already understaffed and have difficulty keeping up with current cataloging and are thus not equipped to pursue extensive, specialized database maintenance. On the other hand, the optimal faceted discovery environment will not be attained until a critical mass of metadata includes these terms. It is out of this dilemma that a compelling solution has presented itself: the programmatic assignment of faceted terms based on existing metadata. Most of the legacy records for music

resources in library catalogs include at least one LC subject heading, and many also include coded metadata describing form/genre, medium of performance and other attributes⁵⁹. These constitute excellent sources from which to derive LC-compliant faceted terms.

As the derivation process is quite complex, a project group within MLA's Vocabularies Subcommittee has begun to study the problem and craft an algorithm with which to derive faceted terms from LCSH headings and MARC codes. While a great number of LCSH headings and codes are amenable to a one-to-one transformation into a faceted term describing a single concept (e.g., **Popular music**, **Symphonies**, jz [the MARC code for jazz]), many others require analysis and deconstruction into their component parts. This is because the ornate rules for constructing LCSH music headings⁶⁰ require the systematic permutation of form/genre, medium of performance, geographic, chronological, language, audience and other attributes. For example, the LCSH heading Suites (Clarinet, viola, cello)--Scores and parts would generate the LCMPT terms clarinet, viola and cello (along with encoded data for the number of performers) and the LCGFT terms **Suites**, **Chamber music**, **Scores** and **Parts** (**Music**). In a less straightforward example, the LCSH heading **Symphonies--Scores** would generate the LCGFT terms Symphonies and Scores, as well as the LCMPT term orchestra; the medium of performance term is inferred based on the unqualified LCSH heading, which conveys the implied medium of orchestra. This illustrates one of the difficulties in constructing such an algorithm; it must take into account not only literal values within the source data, but also implied values therein based on knowledge of the subject heading system. Another difficulty lies in the truncation and generalization of medium of performance in ensembles with more than nine parts (as mentioned above), accompanying ensembles, vocal soloists within ensembles that include chorus, and many others. In such cases, a machine algorithm can only perpetuate the low level of granularity

present in the source LCSH data. A third difficulty lies in addressing the inherent art music and geographic biases in LCSH practice. Works of art music are often described only in terms of their medium of performance, whereas geographic subdivisions are applied much less frequently when the music originates in the country of the cataloging agency than when the music originates elsewhere. The authors acknowledge these limitations in automated metadata remediation, but feel strongly that they are not justification for foregoing or delaying the endeavor, and that there is great benefit in populating older metadata with faceted terms, even if the complements of terms are not exhaustive in all cases. The algorithm may also provide for limited cases where the output should be flagged for human review.

After this algorithm has been thoroughly tested, we hope that agencies such as OCLC, who are responsible for large corpora of bibliographic metadata, will implement it. Efforts to advocate for this widespread retrospective implementation are already underway, and a working group within the American Library Association's Subcommittee on Genre/Form

Implementation⁶¹ has been charged to pursue this advocacy.

Once retrospective implementation has been satisfactorily achieved, LCSH itself will need to be restructured to cancel those headings which have been used only to describe music resources directly (and not works about them). It is anticipated that MLA will continue to work closely with LC PSD in carrying out this follow-on endeavor.

Conclusion

Will there ever be a full music thesaurus, combining topical headings as well as genre, form medium, and other facets? The music library world has obviously moved beyond needing a print resource for music terms, so the question remains regarding the need for an online

thesaurus for the music discipline. LCGFT, LCMPT, and related new vocabularies being developed under the aegis of the Library of Congress represent some of the building blocks toward a more modern approach typical of Semantic Web resources, in which distinct vocabularies within and between disciplines may be combined using linked data principles. In this world where LC-sponsored vocabularies can be combined with each other and with outside ontologies, perhaps a single music vocabulary resource is no longer needed. As long as each vocabulary can be effectively used or meaningfully combined, the new faceted vocabularies should contribute greatly toward meeting the needs of music library users.

ABSTRACT

The Library of Congress Medium of Performance Thesaurus (LCMPT) and the music portions of the Library of Congress Genre/Form Terms for Library and Archival Materials (LCGFT) are long-anticipated products in a history of problem-solving approaches toward faceted access to music resources. MLA's Cataloging and Metadata Committee has collaborated with the Library of Congress for the past several years in a multi-phase endeavor to design and build out these new vocabularies. Implementation within the Anglo-American music cataloging community began in 2014, and retrospective implementation (the programmatic assignment of faceted terms to legacy metadata) is currently being studied and pursued.

¹ Beth Iseminger is the Senior Music Catalog Librarian at the Eda Kuhn Loeb Music Library at Harvard University. She was the first chair of the MLA Genre/Form Task Force, and was chair of the MLA Cataloging and Metadata Committee when the LC vocabularies and best practices were published. Nancy Lorimer is the Head of the Metadata Department at Stanford University. Nancy was the second chair of the MLA Genre/Form Task Force and was responsible for leading

the project to completion. She is also the SACO Music Funnel Coordinator. Nancy was a participant in the Linked Data for Libraries project, and is currently part of the Linked Data for Production project. Casey Mullin is Music Cataloger at BookOps, the shared technical services organization of the New York Public Library and Brooklyn Public Library. He is the current chair of the MLA Vocabularies Subcommittee and was a member of the MLA Genre/Form Task Force. Hermine Vermeij is the Team Leader of the Subject Specialists and the Music Cataloger in the UCLA Cataloging and Metadata Center. She was a member of the MLA Genre/Form Task Force, and was chair of the Subject Access Subcommittee during the development of the Library of Congress Medium of Performance Thesaurus.

2016, http://www.loc.gov/aba/publications/FreeLCMPT/freelcmpt.html

² "Library of Congress Medium of Performance Thesaurus for Music: PDF files," *Library of Congress*, accessed August 29,

³ "Library of Congress Genre/Form Terms: PDF Files," *Library of* Congress, accessed August 29, 2016, http://www.loc.gov/aba/publications/FreeLCGFT/freelcgft.html

⁴ Helen E. Bush and David Judson Haykin, "Music Subject Headings," *Notes* 6, no. 1 (December 1948): 39-45.

⁵ Ibid.

⁶ Mark McKnight, "Are We There Yet? Toward a Workable Controlled Vocabulary for Music," *Fontes Artis Musicae* 59, no. 3 (July 2012): 286-292.

⁷ MLA Music Thesaurus Project Working Group, "Improving Access to Music: A Report of the MLA Music Thesaurus Project Working Group," *Notes* (June 1989): 714-721.

⁸ "Library of Congress Subject Headings: PDF Files," *Library of Congress*, accessed August 29, 2016, http://www.loc.gov/aba/publications/FreeLCSH/freelcsh.html

⁹ Perry Bratcher and Jennifer Smith, *Music Subject Headings Compiled from Library of Congress Subject Headings* (Lake Crystal, MN: Soldier Creek Press, (1988).

- ¹⁰ Harriette Hemmasi, "Notes on Research: ARIS Music Thesaurus: Another View of LCSH," *Library Resources and Technical Services* 36, no. 4 (October 1992): 487-503.
- ¹¹ Harriette Hemmasi, "The Music Thesaurus: Function and Foundations," *Notes* 50, no. 3 (March 1994): 875-882.
- ¹² Mary Wallace Davidson, "American Music Libraries and Librarianship: Challenges for the Nineties," *Notes* 50 (September 1993): 13-22.
- ¹³ Ken Valdes and others, "Improving Subject Access for Music Materials: A Proposal by the Music Subject Group, Library of Congress, April 28, 1993," *Music Cataloging Bulletin* 24, no. 7 (July 1993): 2-6.

¹⁴ Ibid.

¹⁵ Hemmasi, "The Music Thesaurus" 875-882.

¹⁶ McKnight, "Are We There Yet?" 286-292.

¹⁷ Beth Iseminger, "The Music Genre/Form Project: History, Accomplishments, and Future Directions," in *Directions in Music Cataloging*, edited by Peter H. Lisius and Richard Griscom (Middleton, WI: A-R Editions, Inc., 2012, 63-77.

¹⁸ Iseminger, "The Music Genre/Form Project", 63-77.

¹⁹ McKnight, "Are We There Yet?" 286-292.

²⁰ Harriette Hemmasi and J. Bradford Young, "LCSH for Music: Historical and Empirical Perspectives," *Cataloging & Classification Quarterly, vol.* 29, no. 1/2 (2000), 135-157.

²¹ Linked Data refers to a technique of parsing information to make it more "machine-actionable" on the Web. It uses uniform resource identifiers (URIs) to represent unique concepts and expose

connections to myriad data sources (within and outside of the library domain) much like those traditionally found in authority records (names, titles, and subjects.) Existing authority records for all of these library concepts is the primary prerequisite for transforming library data into Linked Data. The relationship between the authorized heading and the "see also" references inherent in authority control as well as the relationships in bibliographic records (between an entity identified by a heading, and the resource being described by the bibliographic record) provide the structure that "links" the "data." Essentially, with authority control, "things" are represented by "strings" [of text], but with Linked Data, "things" are represented by URIs and the "strings" are secondary.

²² Ibid.

²³ Daniel Tunkelang, "Faceted Search," *Synthesis Lectures on Information Concepts, Retrieval, and Services,* 1, no. 1 (2009): 1-80.

²⁴ Marti Heast, "Design Recommendations for Hierarchical Faceted Search Interfaces," *ACM SIGIR Workshop on Faceted Search*, 2006: 1-5.

²⁵ Tracey Snyder, "Music Materials in a Faceted Catalog: Interviews with Faculty and Graduate Students," *Music Reference Services Quarterly*, 13, no. 3-4 (2010): 66-95.

²⁶ McKnight, "Are We There Yet?" 286-292.

²⁷ LCGFT includes class/class member and whole/part relationships (**Songs/Carols**, **Motion pictures/Film clips**); LCMPT includes class/class member relationships only (**Wind instrument/Piccolo**); and LCDGT is much more flat in structure using categories more than hierarchy, due to the problems intrinsic in attempting to classifying persons, and it includes only a few BT or NT relationships (**Arabs/Bedouin**)

²⁸ Janis Young, "Unlimited Opportunities for Enhanced Access to Resources: the Library of Congress' Faceted Vocabularies" (paper presented at the IFLA Satellite Meeting "Subject Access: Unlimited Opportunities", Columbus, Ohio, August 11-12, 2016). ²⁹ Geraldine E. Ostrove, "Music Subject Cataloging and Form/Genre Implementation at the Library of Congress," Cataloging & Classification Quarterly 32, no. 2 (2001), 91-106. ³⁰ Members of the MLA Genre/Form Task Force: Ralph Hartsock, Caitlin Hunter, Beth Iseminger (Chair, 2009-2013), Martin Jenkins, Brooke Lippy, Nancy Lorimer (Chair, 2013-2016), Mark McKnight, Casey Mullin, Thomas Pease, Karen Peters, Sheila Torres-Blank, and Hermine Vermeij. Members of the MLA Vocabularies Subcommittee: Janet Bradford, Rebecca Belford, Margaret Corby, Emma Dederick, Matt Ertz, Patricia Falk, Ralph Hartsock, Martin Jenkins, Kenneth Kaufmann, Kevin Kishimoto, Peter Lisius, Nancy Lorimer, Casey Mullin (Chair, 2014-present), Carlos Peña, Karen Peters, Priscilla Jane Smith, Sheila Torres-Blank, Hermine Vermeij (Chair, 2010-2014), Janelle West, Brad Young. Members of the LC Music Genre/Form Project Group: Caitlin Hunter, Bruce Johnson, Margaret Kruesi, Geraldine Ostrove (Chair), Lisa Shiota, Maarja Vigorito, and Stephen Yusko. Special thanks is owed to Janis Young, LC Policy and Standards Division, for her help in producing LCGFT for music and

LCMPT.

³¹ Iseminger, "The Music Genre/Form Project," 63-77.

³² Ibid.

³³ http://www.loc.gov/catdir/cpso/genremusic.html (accessed 21 August 2016)

³⁴ http://www.loc.gov/catdir/cpso/medprf-list-launch.html (accessed 21 August 2016)

³⁵ Grove Music Online, "Genre," accessed 13 August 2016, http://www.oxfordmusiconline.com (accessed 21 August 2016).

www.dlib.indiana.edu/projects/variations3/metadata/guide/controlVocab.html (accessed 21 August 2016); "Types of Composition for Use in Uniform Titles",

https://www.musiclibraryassoc.org/mpage/cmc_accpointsaacr2 (accessed 21 August 2016);
IAML International Association of Music Libraries, Archives, and Documentation Centres
medium and genre lists, http://www.iaml.info/en/activities/cataloguing/unimarc/medium/
(accessed 21 August 2016), http://www.iaml.info/activities/cataloguing/unimarc/forms (accessed
21 August 2016); https://www.iaml.info/activities/cataloguing/unimarc/forms (accessed
21 August 2016); https://www.iaml.info/activities/cataloguing/unimarc/forms (accessed
21 August 2016), https://www.iaml.info/activities/cataloguing/unimarc/forms (accessed
21 August 2016); https://www.iaml.info/act

³⁶ Grove Music Online, "Form," accessed 13 August 2016, http://www.oxfordmusiconline.com (accessed 21 August 2016).

³⁷ IFLA Working Group on Functional Requirements and Numbering of Authority Records,
Functional Requirements for Authority Data: A Conceptual Mode, ed. Glenn Patton (Munich: K.
G. Saur, 2009), 43-44.

³⁸ Iseminger, "The Music Genre/Form Project," 63-77.

³⁹ The Task Force used the following additional sources: the controlled vocabularies from the Variations Metadata project,

 $^{^{\}rm 40}$ Is eminger, "The Music Genre/Form Project," 63-77.

⁴¹ Hemmasi, "The Music Thesaurus," 875-882.

⁴² McKnight, "Are We There Yet?" 286-292.

⁴³ Hemmasi, "The Music Thesaurus," 875-882.

http://www.loc.gov/aba/publications/FreeLCGFT/J120.pdf (accessed 21 August 2016)

https://www.loc.gov/marc/marbi/2012/2012-01.html

https://www.loc.gov/marc/marbi/2013/2013-02.html

https://www.loc.gov/marc/mac/2015/2015-06.html

https://www.loc.gov/marc/mac/2016/2016-02.html

⁴⁴ Iseminger, "The Music Genre/Form Project," 63-77.

⁴⁵ Iseminger, "The Music Genre/Form Project," 63-77.

⁴⁶ "Genres and forms may be broadly defined as categories of resources that share known conventions. More specifically, genre/form terms may describe the purpose, structure, content, and/or themes of resources. Genre/form terms describing content and themes most frequently refer to creative works and denote common rhetorical devices that usually combine elements such as plot, settings, character types, etc. Such terms may be closely related to the subjects of the creative works, but are distinct from them."

⁴⁷ Iseminger, "The Music Genre/Form Project," 63-77.

⁴⁸ Hemmasi, "The Music Thesaurus," 875-882.

⁴⁹ Erich M. Von Hornbostel and Curt Sachs, "Classification of Musical Instruments: Translated From the Original German by Anthony Baines and Klaus P. Wachsmann," *The Galpin Society Journal*, vol. 14 (March 1961): 3-29.

 $^{^{50}}$ "MARC Proposal no. 2012-01," accessed August 15, 2016,

⁵¹ "MARC Proposal no. 2013-02," accessed August 15, 2016,

 $^{^{52}}$ "MARC Proposal no. 2015-06," accessed August 15, 2016,

⁵³ "MARC Proposal no. 2016-02," accessed August 15, 2016,

http://www.musiclibraryassoc.org/resource/resmgr/BCC_Resources/BPsForUsingLCMPT_2202_2016v2.pdf (accessed 19 August 2016)

http://www.musiclibraryassoc.org/resource/resmgr/BCC_Genre_Form_Task_Force/BestPractice s160621.pdf (accessed 19 August 2016)

- ⁵⁷ PowerPoint slideshow from this workshop is available here: http://musicoclcusers.org/wp-content/uploads/LCMPT-LCGFTWorkshop1.pptx (accessed 19 August 2016)
- ⁵⁸ Archival slideshow available on SlideShare: http://www.slideshare.net/ALATechSource/mla-workshop-introduction-to-lcs-music-medium-of-performance-and-genre-vocabularies (accessed 19 August 2016)
- ⁵⁹ These include codes from the MARC Form of Composition Code List

 (https://www.loc.gov/standards/valuelist/marcmuscomp.html (accessed 19 August 2016)) and
 the MARC Instruments and Voices Code List

(https://www.loc.gov/standards/valuelist/marcmusperf.html (accessed 19 August 2016))

⁶⁰ These rules are described in LC's *Subject Headings Manual* (available at https://www.loc.gov/aba/publications/FreeSHM/freeshm.html (accessed 19 August 2016)), most notably instruction sheets H 1916.5 ("Music: Jazz and Popular Music"), H 1917 ("Music of Ethnic, National, and Religious Groups") and H 1917.5 ("Music Form/Genre Headings: Medium of Performance")

⁵⁴ The full text of the announcement is available here: https://www.loc.gov/catdir/cpso/lcdgt-announcement.html (accessed 19 August 2016)

⁵⁵ Freely available online at

⁵⁶ Freely available online at

http://www.ala.org/alcts/mgrps/camms/cmtes/sac/ats-ccssacgenre (accessed 19 August 2016)

⁶¹ More information on the group's charge is available here: