ENABLING ACCESS TO BYZANTINE MUSIC MANUSCRIPTS IN AN INTERNATIONAL CONTEXT: THE CASE OF NIKOLAOS MAVROPOULOS ARCHIVE

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ABSTRACT | Ο κατάλογος του αρχείου There has been a growing interest in digital archive development in academic music libraries over the past years in national and international level. Traditional and new descriptive cataloging standards have changed the way libraries and cataloging agencies formulate their bibliographic metadata in general and music metadata in particular. Music archives and special collections with emphasis on Hellenic music collect documents of any form or format from various composers, performers, scholars and so on. Yet, the music library community both in and out of Greece is still faced with unique descriptive issues regarding printed and manuscript music among others. Moreover, by taking into account that the vast majority of music sources in Greece, dated from the 9th to the 20th century, record music of the Byzantine and post-Byzantine eras, a sacred music repertory of distinctive characteristics in terms of modality, notation and performance practice, makes the descriptive endeavour even more complicated. Within this frame, the paper aims at: a) providing a basic set of guidelines and best practices for describing and providing access in regard with print and manuscript music archival resources in general, as well as
with Hellenic music in specific, through the example of the collection of Byzantine music manuscripts of Nikolaos Mavropoulos, b) bringing out interoperability issues between Byzantine Musicology and Music Librarianship, c) stressing the importance of Muscat (RISM’s international database) for the dissemination of Byzantine music across the world, and d) emphasizing on issues regarding the necessary professional experience and knowledge to accomplish efficiently such tasks.

**KEYWORDS:** Music cataloging, archival research, byzantine music

1. **Byzantine music: definition, geographical and historical context, and the cataloging of its primary sources**

Byzantine chant is the medieval ecclesiastical monophonic chant of the Byzantine Empire (330-1453) and by extension the liturgical music of the post-Byzantine Era up to the present. It is also encompasses the chant of the Eastern European, Asia Minor, Middle Eastern and Northern African churches that followed the Byzantine Rite.

Byzantine liturgical chant tradition survived the collapse of the Byzantine Empire (1453) and continued its course of development and performance practices uninterrupted up to our days. For that reason, Byzantine chant is considered the oldest, long-lived music tradition in Europe. It represents a more than a thousand years of growth in distinguishing styles and performance practices and discloses a unique organization of theoretical structure, including but not limited to, the systematic treatment of octoechos (eight modes) and the skilful musical embellishment of the sacred text, as are, the centonization and kalophonic techniques of composition. The Byzantine chant left traces of its influence on the musical rites of Mozarabic Spain, Rome, Milan, Ravenna, South Italy and the Carolingian recensions of Gregorian chant. On that ground, Byzantine music is considered by scholars as the pace setter for musical styles in Western Christendom mainly during the 4th and 9th centuries (Kenneth, 1977).

The earliest surviving primary sources of Byzantine monophonic chant are dated around the 10th century. The transcribed melodies are recorded with the usage of four distinct notational scripts. The oldest sources use two notational scripts to record ecclesiastical music. These are the so-called “Paleobyzantine” notations “Chartres” and “Coislin” which were adiastematic and were developed in parallel routes until the first half of the eleventh century. “Chartres” was named because a manuscript which records this type of notation was found in the library of the city of Chartres (Chartres, 1754). ‘Coislin’ was named because another manuscript with this type of notation was found in the National Library in Paris inside the ‘Coislin’ collection (Coislin 220). The Chartres notation is abandoned around the eleventh century while the ‘Coislin’ was in use until around 1170 when it was finally abandoned and replaced with the ‘Round’ notation (Constantin, 2005).

Both music notations had an undeniable, direct and permanent influence on the Latin neumatic scripts (Constantin, 1998).

The ecclesiastical repertory is recorded in an impressive body of around five thousand music manuscripts. The vast majority of these materials are located mainly in Greece but one may find such
treasures in libraries and archives scattered around the world. These sources record the Byzantine compositions of hundreds of known and unknown composers and performers. From a neglected area of musicological research, in comparison with its Western counterpart (Gregorian chant) as well as within the frame of Byzantine studies until roughly the turn of the century, Byzantine music is currently recognized as a music subject worth studying. Some of the libraries hosting Byzantine music manuscripts are: Athens, National Library of Greece, Mount Athos Monastic Community Libraries, St. Catherine Monastery at Mount Sinai, Oxford, Bodleian Library, Vienna, Österreichischen Nationalbibliothek, Vatican City, Biblioteca Apostolica, Jerusalem, Library of the Greek Patriarchate, Thessalonike, Vlataodon Monastery, Grottaferrata, Biblioteca del Monumento Nazionale, Milan, Biblioteca Ambrosiana. Therefore, the aim of our team is to bring fourth as many of the primary sources as possible to the music community in order to promote, facilitate, encourage and stimulate further musicological research on Eastern chant and beyond.

Muscat as RISM’s central cataloging program for musical sources is regarded as more than an adequate tool for research and promotion. Muscat is by far the ideal tool for research on comparative studies of distinct medieval music repertories. By the same token, with around 5,000 music codices on their way to cataloging, Byzantine chant establishes its position on the musical map of medieval Europe with a huge body of accurately encoded music sources available to all.

The major challenge of our team for such an endeavour has been to identify the Byzantine music-specific related attributes and to encode them as metadata as accurately as possible. In other words, a music corpus with distinct and unique characteristics as are the eight modes, the martyria (key signatures), notational scripts in campo aperto, is partially represented by the specific fields provided so far in Muscat, which is customized to accommodate music metadata mainly stemming out of the Western Canon. The customization and further development of the software is thus necessary in order to represent the inherent attributes of the primary sources and thus to respond effectively to the user’s needs.

2. The Archive of Byzantine Music Manuscripts of Nikolaos Mavropoulos (Archeion Vyzantinōn Cheiropigraphōn Nikolaou Mavropoulou)

Nikolaos Mavropoulos was born in Beykoz, North Bosphorus, Constantinople in 1888. He first studied Byzantine music and served as a Domestikos (Choimaster), with the Protopsaltes (Archcanor), Ioannis Vasiliadis, chanted in various churches of Constantinople such as Panagia Kafatiani, Panagia Mouhliou, Dormition in Pringipos island (Buyuk Ada), St Eufimia in Chalkedon (Kadikoy), St John of Chios as a Lampadarios (left cantor) to Neleus Kamarados. In 1915 after the resignation of Demetrios Fokaeus, he served as a First Domestikos to the Archon Protopsaltes (Archon Archcantor) Iakovos Nafpliotis, at the Patriarchal Church of St George. In the early ‘20s he was deported to Greece and in 1925 he was appointed Protopsaltes at the Church of Pantanassa in Patras. In 1945 he moved to Athens and was appointed Protopsaltes at the Cathedral of St Dionysius the Aeropagite. In 1951 he was ordained as a priest and he served at the Church of Saint Foteini in New Smyrna, Athens. He passed away on the 23rd of July 1980.
The online collection of the music manuscripts collection of Nikolaos Mavropoulos, provides access to digitized versions of about 70 Byzantine music scores and a small number of old and recent recordings of Mavropoulos and contemporary chanters. “Glory” to the Lauds and stichera of Vespers and Matins of various Saints of the Eastern Orthodox Church are mostly included in the collection, which was acquired by the Library, from an antique store in Athens several years ago. The goal of the Library’s project was to create and provide online access to high-quality images and descriptions of music manuscripts of Nikolaos Mavropoulos, owned by the Library of School of Music Studies. Images and descriptions of these manuscripts are available online through the Library’s Dspace digital repository Sophia for study by musicians, scholars and the general public.

Due to its small size, the manuscript collection from the Nikolaos Mavropoulos Archive was selected by the RISM Greek Office team to use it as a pilot project of cataloging byzantine music manuscripts in Muscat, the ILS of RISM. In addition, the musical content of the manuscripts is very significant for the history of Byzantine chant in the 20th century by reason that, Nikolaos Mavropoulos represents a transitional period in the recording of the interpretations of ecclesiastical music. Since during this period, the recording of detailed music analysis and novel thesis of the melodic lines according to the ‘Constantinopolitan style’ of Byzantine chant rendition, was up to that time existed only in the oral realm.

According to an oral testimony of the Saint George Patriarchal Church of Constantinople cantor, Leonids Asteris, to musicologist Panagiotis Panagiotidis, these melodic analyses prevailed mainly in the parishes of Constantinople and its surroundings, and not in the Patriarchal Church of Saint George, where they strictly adhere to the Doric style. Therefore, Nikolaos Mavropoulos through his manuscripts and few sound recordings of exceptional interpretation represents the music movement of his era, along with his other contemporary Neleus Kamarados and Konstantinos Prigkos.

3. About Muscat

Muscat, RISM’s central cataloging program since 2016, is a framework for cataloging music documents (handwritten and printed music scores). It is a Rails application that provides facilities for creating and managing MARC 21 records with a focus on music. The project was initiated by the United Kingdom working group of the Répertoire International des Sources Musicales-RISM and then developed further by the Swiss working group. It is now being released as a multilingual, open source, web-based, platform-independent program, available free of charge to anyone who is interested. It enables direct access to the RISM database hosted by the Staatsbibliothek zu Berlin, Preußischer Kulturbesitz. It is a MARC-based system developed jointly with RISM Switzerland and the RISM Zentralredaktion (Central Office) and is based on a program jointly developed by RISM Switzerland and RISM UK. Muscat helps document sources according to RISM’s international guidelines, which are provided in Muscat (RISM, 2018).

4. Scope of printed music in RISM

RISM seeks to document printed music from the beginnings of music printing through around 1900. In the case of the specific Byzantine music manuscripts, published somewhere early in the 20th
century, RISM has considered them rare and of historical significance thanks to their unique music-specific attributes besides the fact that the manuscripts represent non-Western secular music.

5. Cataloging “Archeio Byzantinōn Cheirographōn Nikolaou Mavropoulou”

In RISM, a collection is considered to be both an international collective manuscript or an anthology of multiple works as well as an item that contains two or more separate pieces. In the case of the Archeio Byzantinōn Cheirographōn Nikolaou Mavropoulou, the archive consists of separate, discrete manuscripts, described separately. RISM treats each manuscript as a unique item and therefore each manuscript has its own RISM record. Within this frame, cataloging the specific archival music resources in Muscat was made possible.

6. Muscat’s cataloging conventions

Muscat uses the MARC 21 Format for Bibliographic and Authority data to ensure and enhance access to organization of music and music-related archival resources. Besides MARC 21, it implements the following description standards: a) Anglo-American Cataloging Rules, 2nd edition, b) Descriptive Cataloging of Rare Materials (Music)-DCRM(M), c) the ISBD consolidated edition, which incorporates the rules formerly known as ISBD(A): International Standard Bibliographic Description for Older Monographic Publications (Antiquarian) and ISBD(PM): International Standard Bibliographic Description for Printed Music, d) the Library of Congress Rule Interpretations-LCRI, e) together with RISM’s conventions. Muscat does not implement Resource Description and Access-RDA to describe its resources either directly (through the new fields provided by MARC 21 as aligned with RDA) or indirectly through the DCRM(M)’s alignment with RDA.

7. Byzantine music-related bibliographic metadata

Titles-Standardized and source titles

Standardized titles are entered using modern orthography. In the case of Byzantine music manuscripts the language used to record standardized titles is Greek before 1453, while source titles are entered in Greek and romanized alphabet. The transliteration schemes used are ALA-LC Romanization Tables: Transliteration Schemes for Non-Roman Scripts approved by the Library of Congress and the American Library Association.

Example

<table>
<thead>
<tr>
<th>GR-THms LMS NM 24</th>
</tr>
</thead>
<tbody>
<tr>
<td>Title on source: Σήμερον ὁ λαμπτήρ ὁ διαυγής. Δόξα εἰς τους αἴνους Αγίου Τρύφωνος [Σήμερον ὁ λαμπτήρ ὁ διαυγής. Δόξα εἰς τους αἴνους Αγίου Τρύφωνος]</td>
</tr>
<tr>
<td>Standardized title: “Σήμερον ὁ λαμπτήρ ὁ διαυγής ἐκ λάμπει ἐξ ἔμωσις”</td>
</tr>
</tbody>
</table>

Standardized title: “Σήμερον ὁ λαμπτήρ ὁ διαυγής ἐκ λάμπει ἐξ ἔμωσις”
Standardized titles in Byzantine music manuscripts are derived from the source title. They do not consist of a statement of the author, instrumentation, number, or imprint. They do not imply affiliation with another item. They do not consist of genres and do not indicate that are parts of some other entity.

8. Library information - Library siglum

This part records details of the library or institution that holds the item. In the case of Archeio Byzantinōn Cheirographōn Nikolaou Mavropoulou the institution that holds the collection and its items is Tmēma Mousikōn Spoudōn, Aristoteleio Panaeistēmio Thessalonikis, Vivlioθēkē - School of Music Studies.

9. Library siglum (852/$a/$b/$c/$z)

The field 852 is a required field. That means that no bibliographic record can be saved unless the field is present. The siglum of the holding library is entered in the record. It is accordingly linked to the Institutions authority file. In the case of Archeio Byzantinōn Cheirographōn Nikolaou Mavropoulou the siglum used defines the specific library which is part of a larger centralized library, thus a more specific location information is necessary. The name of the department is entered in the local language. The field 852/$z$ is used to record the name of a special collection, such as a collection, bequest, gift, papers, archive, Nachlass, or similar, that the source is part of. In the case of the Archeio Byzantinōn Cheirographōn Nikolaou Mavropoulou the provenance name is Nikolaos Mavropoulos Archive. The provenance name is entered in the field Provenance note (561) (see below). The field 852/$c$ is a required field, where the shelfmark (also called the call number) is entered. It is transcribed as precisely as possible, including spacing and punctuation. Shelfmarks are entered consistently within any given library collection. The shelf mark in the case of the Byzantine music collection of Nikolaos Mavropoulos is entered as follows:

Example:

| GR-THms |
| Tmēma Mousikōn Spoudōn, Aristoteleio Panaeistēmio Thessalonikis, Vivlioθēkē |
| School of Music Studies |
| LMS NM 24 |

No other shelfmarks are used or considered valid or invalid for the particular collection, thus neither field 852/$d$ (Former shelfmark (olim)) nor field 591 (Other shelfmark) are accordingly used.

Access restrictions (506/$f$). The terms and conditions of the holding institution regarding the specific collection are entered here.

Example:

Consultation in the reading room.
Provenance (561/$a). The field is used to record general notes about the provenance of the item as well as ownership marks. Ownership marks are not present on the sources of the collection.

Example:
“Originally owned and maintained by Nikolaos Mavropoulos, was sold by his heirs after his death”

Source of acquisition. This part records how the holding institution acquired the item.

Method of acquisition (541/$c/$a/$d). Here is entered how the item was acquired, such as gift, bequest, loan, purchase, or deposit. Dates are entered in the form YYYYMMDD, while single years may be entered as YYYY. In the case of Archeio Byzantinōn Cheirographōn Nikolaou Mavropoulou there is only one single date of acquisition regarding all manuscripts. No accession number is provided on manuscripts; thus field 541/$e is not used.

Example

Purchase
Antiquarian
2007

Parent record (773/$w). The field is used to link the records referring to the several manuscripts to their parent record, since individual records are part of a collection. The link to the next highest level, although necessary, remains a task to be completed.

Example

Parent record no.: 1001030501

Composer/Author. The authorship of the main person involved [who is responsible for the content of the work] is recorded here.

Composer/Author name (100/$a/$d/$j). Field 100/$a is a required field. The name of the person responsible for the work is entered. This in the case of Archeio Byzantinōn Cheirographōn Nikolaou Mavropoulou includes three composers of Byzantine music manuscripts, i.e., Nikolaos Mavropoulos, Skrekos Georgios and Sarantaekklēssiōtēs, Geōrgios. This field is linked to the Personal names authority file. Each new name, including life dates, is be confirmed and edited by the Central Office.

Example

Mavropoulos, Nikolaos, 1888–1980
Ascertained

Additional personal name (700/$a/$d/$j/$4). Here are entered all personal names that appear on the source. This field is linked to the Personal names authority file. Names not yet in the authority file
may be added. Standardized forms of the personal names are entered in the field Additional personal names (700) and institutions in Additional institutions (710) as well as names not yet in the authority file.

**Example**

| Mavropoulos, Nikolaos, 1888-1890 | Ascertained | Former owner |

**Title on source (245 $a).** The title is entered exactly as it appears on the source. It’s also transliterated according to the ALA-LC Romanization tables: Greek. The field is required.

**Example**

| Τὸν νομικὸν διδαγμάτων. Δόξα εἰς τοὺς αἰνοὺς. Τῇ Κυριακῇ πρὸ τῆς Χ. γεννήσεως [Τὸν νομικὸν διδαγμάτων. Δόξα εἰς τοὺς αἰνοὺς. Τῇ Κυριακῇ πρὸ τῆς Χ. γεννήσεως] | Fragments |

**Standardized title (240/$a/$g/$k/$r).** Also called the filing or uniform title [or preferred title according to RDA]. The field is required.

**Example**

| Τὸν νομικὸν διδαγμάτων ὁ σύλλογος | Octoechos 8: Echos plagios tetartos (Fourth plagal mode of Byzantine music). |

Muscat does not yet provide the values that correspond to Byzantine music-specific elements such as fthores (modal symbols) used to denote a change in scale.

**Additional title (730/$a$/g/$k$/r).** This field is used to record alternatives to the Standardized title (240 $a), also in a standardized form.

**Example**

| Δόξα Πατρί καὶ Υἱῷ καὶ Αγίῳ Πνεύματι | RISM |

| Octoechos 8: Echos plagios tetartos (Fourth plagal mode of Byzantine music). | V |

**Subject heading (650 $a).** The field is linked to the index Subjects. It is considered a required field in full level cataloging in Muscat.

**Example**

| Orthros (Music) |
Certain Byzantine-music specific issues regarding subjects remain to be solved in Muscat.

**Total scoring-voice/instrument (594 $b, $c)**. The scoring, vocal parts included, as well as the total number of parts, are recorded here. The field is mandatory.

**Example**

| V | 1 |

**Material description**. This unit includes material description. In specific, the following data fields are used:

**Source type (593/$a)**. The field is used to describe the nature of the source (required field). The specific archive has been written completely in the composer’s own hand.

**Example**

| Autograph music manuscript |

**Publishing, printing, and production information (260) - Date (260/$c)**. The date of the source is entered in Arabic numerals. For manuscripts the date is always given, even approximately. In case month, day, and year are given they are recorded in this form: YYYY-MM-DD.

**Example**

| [194-] |

**Physical description (300)**. This field records the number of items, the format, and (for all formats except parts) the extent. The field is required.

**Format, extent (300/$a/$c)**. The field format, extent (300 $a) is built up of three components: Items, Format, Extent (see also 590 field). For items, the number of items held is recorded. The dimensions of the source are entered as following: height x width in cm.

**Example**

| 25.5 x 30.5 cm |

**External resource URL (856/$u/$z)**. The URL of the external resource is entered along with a brief note describing the external source.

**Example**

| http://sophia.mus.auth.gr/xmlui/handle/881
| Digital copy123456789 |

**Language of cataloging (040/$b)**

**Example**

| gre |
10. Byzantine music-related authorized access points in Muscat

“The Authorities section of Muscat collects all authority files, controlled vocabulary, and indexes” (Muscat, 2018). RISM follows and provides its own set of guidelines and practices for constructing authorized access points (AAPs). Its authority file consists of the following kinds of authorities records:

- Subject headings
- Images
- Institutions
- Liturgical festivals
- Personal names
- Places
- Secondary literature (e.g., catalogs of works, thematic catalogs, books, articles, encyclopaedias, online resources, critical editions, modern performing editions, etc.).

As far as subject headings are concerned, the RISM Office in Greece focuses its efforts on promoting on one hand, on national and international level, a bilingual (English & Greek) controlled vocabulary, and on the other hand a different and more complete semantic approach (how we Greeks define our own [Hellenic] music). Within this frame, we consider Muscat to be of the best tools to achieve the above mentioned goal.

The team has been working so far mainly with SARs (Subject Authority Records) and NARs (Name Authority Records). The two main Byzantine-music specific concepts treated as genre/form terms – not SH – are “Byzantine music” and “Byzantine chants”.

Muscat provides up to now a limited range of fields and structures regarding its vocabularies. That means, that Byzantine music-specific concepts (and thus semantics) cannot be represented adequately at present.

For example, a Muscat-SAR includes only the following data elements regarding an authorized access point as term/heading/concept:

- Term (Main heading or Top term or Concept or Authorized Access Point as subject-AAP) → 150 - Heading - Topical Term
- Alternate terms (Variant terms or Variants or Variant Access Points as subject) → 450 - See From Tracing - Topical Term
- Notes (All sort of notes are included here) → 667 - Nonpublic General Note → 670 - Source Data Found → 675 - Source Data Not Found → 680 - Public General Note

Respectively, a Muscat-NAR includes its own set of data elements, which are the following:

- Heading - Personal name → Field 100 - Heading - Personal Name
- Years if birth and death → Field 100 /ind 1 1 $d Dates associated with a name
- Other life dates → Muscat practice
- Authentication code → Field 042 - Authentication Code - Muscat practice
- Gender → Field 375 - Gender
- Nationality → Field 043 - Geographic Area Code
• Other standard identifier → Field 024 - Other Standard Identifier
• Name variants → Field 400 - See From Tracing - Personal Name
• Related personal name → Field 500 - See Also From Tracing – Personal Name
• Associated institution → Field 510 - See Also From Tracing - Corporate Name
• Topical term → Field 550 - See Also From Tracing - Topical Term
• Geographic name → Field 551 - See Also From Tracing - Geographic Name
• Internal note → Field 667 - Nonpublic General Note
• Source data found → Field 670 - Source Data Found
• Additional bibliographic information → Field 678 - Biographical or Historical Data
• General note → Field 680 - Public General Note
• External resource URI → Field 856 - Electronic Location and Access
• Original cataloging agency → Field 040 - Cataloging Source
• Language of cataloging → Field 040 / $b Language of cataloging
• Transcribing agency → Field 040 / $c Transcribing agency
• Leader → 000
• RISM ID Number → Field 001 - Control Number
• Control number identifier → Field 003 - Control Number Identifier
• Date and time of last transaction → Field 005 - Date and Time of Latest Transaction

11. Tasks under development

Certain Byzantine music-specific attributes tasks remain either unsolved or re-discussed or re-examined. For instance:

• Key Signature: the symbols of martyria. Recording simply the tone does not fulfil the principle of identification and differentiation of the musical work. Martyries-symbols do not only indicate which version of the particular tone the piece is written in, but also give information about the starting note or tonic, intonation formula, rhythm and style (key signature-time signature and clef among other things).

Such development of the database will serve two user-tasks:

• Martyrias can be used as extra music-specific data elements (attributes) and be searchable as such.

• Data elements of not digitized sources can be equally retrievable.

• Incipits can be recorded either as text incipits in modern Greek or Romanized Greek or as music incipits. No Byzantine music-related incipits have been recorded from the specific archive.

• Authorities. The manuscripts have been thoroughly examined and analysed regarding their topics. The subject analysis focuses on Byzantine music-related aspects.
The scheme below provides a set of data fields in a full level authority record encoded according to MARC 21 Authorities.

**Scheme 1. Full level genre/form data fields encoded in MARC 21 Authorities**

<table>
<thead>
<tr>
<th>008/15 z (Other)</th>
<th>040 $f leg$tl</th>
</tr>
</thead>
<tbody>
<tr>
<td>155 Authorized Term</td>
<td>455 Used For reference(s)</td>
</tr>
<tr>
<td>555 Related Term and Broader Term reference(s)</td>
<td>670 Source Data Found</td>
</tr>
<tr>
<td>675 Source Data Not Found</td>
<td>680 Public General Note</td>
</tr>
<tr>
<td>681 Subject Example Tracing Note</td>
<td>682 Deleted Heading Information</td>
</tr>
</tbody>
</table>

E.g.,

682 ## $i$ This authority record has been deleted because the genre/form term is covered by the genre/form term $a$ 80 (DLC)gcXXXXXXX

or

682 ## $i$ This authority record has been deleted because the genre/form term is covered by the genre/form term $a$ 80 (DLC)gcXXXXXXX

or

682 ## $i$ This authority record has been deleted because the genre/form term is covered by an identical genre/form term $0$ (DLC)gcXXXXXXX

755 Established Heading Linking Entry-Genre/Form Term

788 Complex Linking Entry Data

856 Electronic Location and Access

An authorized access point (subject heading) related to the music collection of the Byzantine manuscripts as developed now in Muscat, includes only the “preferred” term/concept, its variants (“alternate terms”) and “notes”, used mainly to record the scope note of the preferred term/concepts, its definition and/or documentation in order to justify the choice of the specific form of the concept. The scheme below provides an example of how a genre/form full level authority record in Muscat could be developed and linked to external vocabularies/thesauri.

**Scheme 2. Full level genre/form MARC 21 authority record linked to different thesauri or authority files**

| 155 | a Masses |
| 555 | w g a Event music |
| 555 | w g a Sacred music |
| 555 | a Missals (Service books) |
| 555 | a Organ masses |

670 | a Grove music online, viewed August 10, 2014 |b (The term most commonly used to describe the early Christian and medieval Latin eucharistic service. It has been retained within Catholicism during modern times. The plainchant of the medieval Mass, and the polyphonic music of the Mass between the 12th and 16th centuries, are central to the history of Western music. The polyphonic Mass Ordinary of the Renaissance is one of the more important genres of European art music.) |

680 | i Musical settings of the Mass in its entirety or for the Mass ordinary. For chants of the Mass proper, see |a Proper (Music). |i For collections of versets for the organ that replace parts of the Ordinary and Proper of the Mass and are played in alternations with the other portions see |a Organ masses. |

681 | i Note under |a Proper (Music); Organ masses |

755 | 7 "aMessas (musique)"/2bnf [the source code for BNF is entered] |

856 | 4 |u http://data.bnf.fr/en/13557958/messas__musique_/ |
In case of multilingual terms – according to RDA, a source with more than one language is considered multilingual – the following structure is suggested.

### Scheme 3. Full level genre/form term as AAP linked to different thesauri or authority files (alternative structure)

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>155</td>
<td>Hymns</td>
<td></td>
</tr>
<tr>
<td>555</td>
<td>Sacred music</td>
<td></td>
</tr>
<tr>
<td>555</td>
<td>Songs</td>
<td></td>
</tr>
</tbody>
</table>

670. [a Grove music online, viewed August 9, 2014: b under Hymn II, Monophonic Latin (The Latin hymn is a strophic composition, sung in the Divine Office, with a metrical poetic text and a predominantly syllabic melody, 'Hymn' here designates compositions for the Office, as distinguished from other liturgical poetry) under Hymn IV, Protestant (Metrical hymns have been an important and distinctive part of Protestant worship since the Reformation. Today the word 'hymn' has the general meaning 'sacred lyric for use in worship')](http://data.bnf.fr/13516277/cantiques/)

755. [a Cantiques](http://data.bnf.fr/13516277/cantiques/)

755. [a Geistliches Lied](http://data.bnf.fr/13516277/cantiques/)

856. [u](https://portal.dnb.de/opac.htm?method=simpleSearch&cqlMode=true&query=nid%3D4019865-0)

### Scheme 4. Full level genre/form term as AAP linked to different thesauri or authority files (alternative structure)

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
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<th></th>
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<tr>
<td>555</td>
<td>Sacred music</td>
<td></td>
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<tr>
<td>555</td>
<td>Songs</td>
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</tbody>
</table>

670. [a Grove music online, viewed August 9, 2014: b under Hymn II, Monophonic Latin (The Latin hymn is a strophic composition, sung in the Divine Office, with a metrical poetic text and a predominantly syllabic melody, 'Hymn' here designates compositions for the Office, as distinguished from other liturgical poetry) under Hymn IV, Protestant (Metrical hymns have been an important and distinctive part of Protestant worship since the Reformation. Today the word 'hymn' has the general meaning 'sacred lyric for use in worship')](http://data.bnf.fr/13516277/cantiques/)

755. [a Cantiques](http://data.bnf.fr/13516277/cantiques/)

755. [a Geistliches Lied](http://data.bnf.fr/13516277/cantiques/)

856. [u](https://portal.dnb.de/opac.htm?method=simpleSearch&cqlMode=true&query=nid%3D4019865-0)
Conclusions

RISM’s tool Musca can contribute to develop and promote Byzantine music and specific concepts and attributes related to this specific genre of Hellenic music. However, certain music-specific data elements both in and out of the Western Canon are not fully represented within Muscat, such as structure-related music elements (e.g., timbre, succession of harmony neumatic notation, martyria, etc.) or inherent music elements (e.g., compositional context, style, etc.).

Additionally, through the task of recording the specific set of manuscripts the following have become evident: a) there is great necessity for Muscat’s alignment with recent initiatives and models of bibliographic data, such as the International Federation of Library Associations and Institutions (IFLA)’s Functional Requirements for Bibliographic Records (FRBR) Library Reference Model–FRBR–LRM or LRM, the under continuous development Resource Description and Access–RDA and the Bibliographic Framework–BIBFRAME to name but a few, b) it is of great importance that Muscat enriches its bibliographic and authority records with more metadata and linking-related structure possibilities, so that current information technologies as they are represented both in and out of MARC environments can be successfully implemented in the Muscat environment as well. Implementing current information technologies on [music] metadata and ensuring interoperability is not actually a matter of “if”, but rather a matter of “how”.

REFERENCES


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