

Plan

- Provide a brief overview of MARC authority format
 - Emphasis on the fields that assist with coding subject headings in bibliographic records
- Not a general overview of the format
 - For more information see
 - *Understanding MARC Authority*
<http://www.loc.gov/marc/uma/>
 - The MARC authority format
<http://www.loc.gov/marc/authority/>

In this module, we will provide an overview of the MARC authority format, with an emphasis on fields that provide practical assistance to catalogers as they code subject headings assigned to bibliographic records.

This is not a comprehensive description of the MARC authority format, so if you are not already familiar with the format, we suggest that you stop the video and read *Understanding MARC Authority*, which is available at the URL on the screen. The publication provides an in-depth yet concise overview of the authority format.

As always, we also encourage you to consult the official documentation. The MARC 21 Format for Authority Data can be found on LC's website at the URL on your screen.

Bibliographic v. Authority Format

- MARC bibliographic records
 - Describe resources
- MARC authority records
 - Contain the authorized forms of headings and access points
 - May include cross-references, source citations, and assignment instructions

The purpose of the authority format is quite different from the purpose of the bibliographic format. The bibliographic format is used to describe resources – who is the author? What is the title? What are the subjects? And so on.

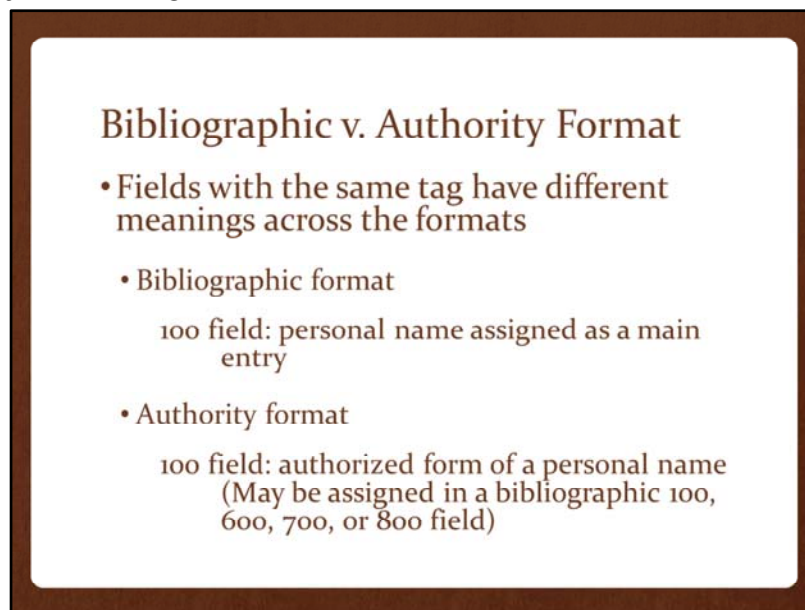
The authority format is used to create authority records, which contain the standardized forms of names for people, corporate bodies, meetings, titles, geographic places, and subjects.

The records also often contain cross-references and citations that support the form of heading and references, and may also include scope notes and guidance on heading assignment.

Bibliographic v. Authority Format

- Both formats
 - Represent fields with three-digit tags
 - Have two indicators per field
 - Have a variable number of subfields in each field

As in the MARC format for bibliographic records, the MARC format for authority data uses a system of three-digit tags to designate fields, two indicators in each field, and a variable number of subfields to code the data.



Bibliographic v. Authority Format

- Fields with the same tag have different meanings across the formats
 - Bibliographic format
 - 100 field: personal name assigned as a main entry
 - Authority format
 - 100 field: authorized form of a personal name
(May be assigned in a bibliographic 100, 600, 700, or 800 field)

It is important to realize that although the authority format and the bibliographic format use the same tags, the tags mean different things.

For example, the 100 field in the bibliographic format is used for a main entry that is a personal name. The 100 field in the authority format is used to show the authorized form of a personal name, and that authorized form may be used in the 100, 600, 700, and 800 fields in a bibliographic record.

We will show you how this works in a few moments.

Overview

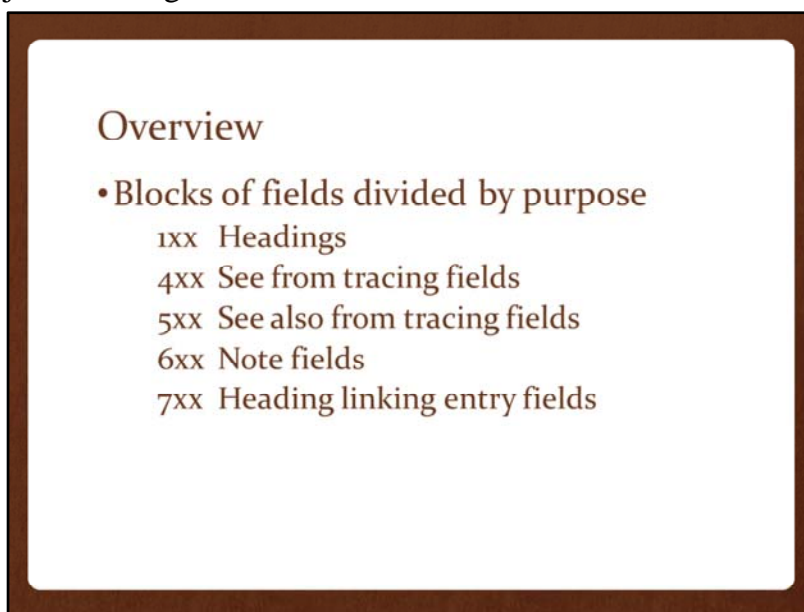
- A single MARC authority format with different implementations
 - LC/NACO Name Authority File
 - LCSH
 - Other vocabularies

There is a single MARC authority format, with multiple implementations even within LC.

For example, some fields are used in LC subject authority records but are not used in name authority records. The most notable example is the 680 field, which is used for scope notes. It appears in LCSH, but not in the NAF.

Other vocabularies that are maintained at LC and elsewhere have other implementations.

This module will focus chiefly on the fields that are used in both the NAF and LCSH.



In the authority format, as in the bibliographic format, there are blocks of fields arranged by purpose.

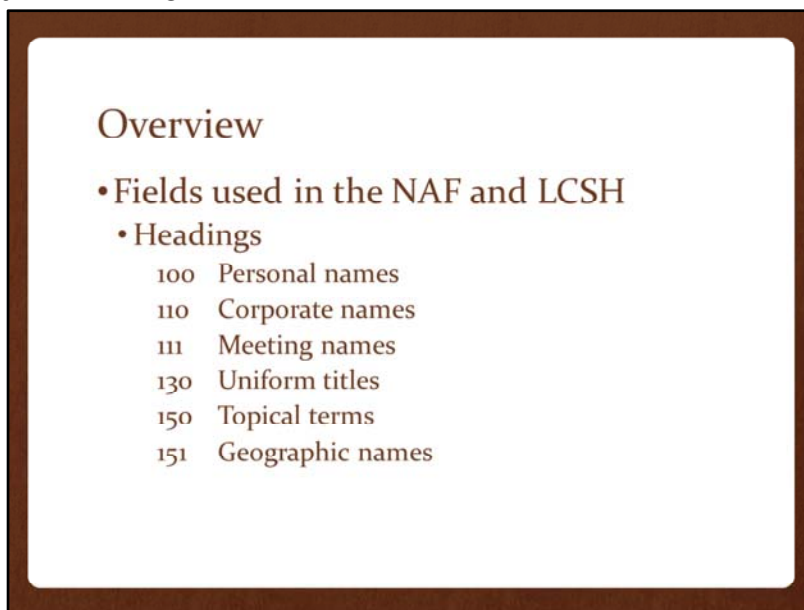
The authorized headings and access points always appear in the 1XX fields.

The 4XX block is used for “see from” tracings. In LCSH, we call them Used For, or UF, references. In the NAF they are called variants.

The 5XX block is used for “see also from” tracings. In LCSH, those are the broader terms and related terms. In the NAF, they are related names and titles.

The 6XX block is used for citations, usage and scope notes, and for other purposes. The fields in this block contain a wide variety of information. Just a few of them are important for subject analysis purposes, and we will discuss them in this module.

The 7XX block contains the linking entry fields. The only 7XX field that we will discuss in this module is the 781 field, and you are already familiar with it. It is the field that contains the authorized form of a geographic subdivision.



Six types of 1XX fields are used in the Name Authority File and LCSH. The 100, 110, 111, 130, and 151 fields are used in both the NAF and LCSH.

Take the 151 field, geographic names, for example. The name of a city is established in the NAF because it is a jurisdiction, and it is coded in the 151 field.

A mountain is established in LCSH because it is a geographic feature, but it is also coded in the 151 field.

The 150 field is used only in LCSH, not in the NAF. It is used for topics, and topics can be established only in LCSH, never in the Name Authority File.

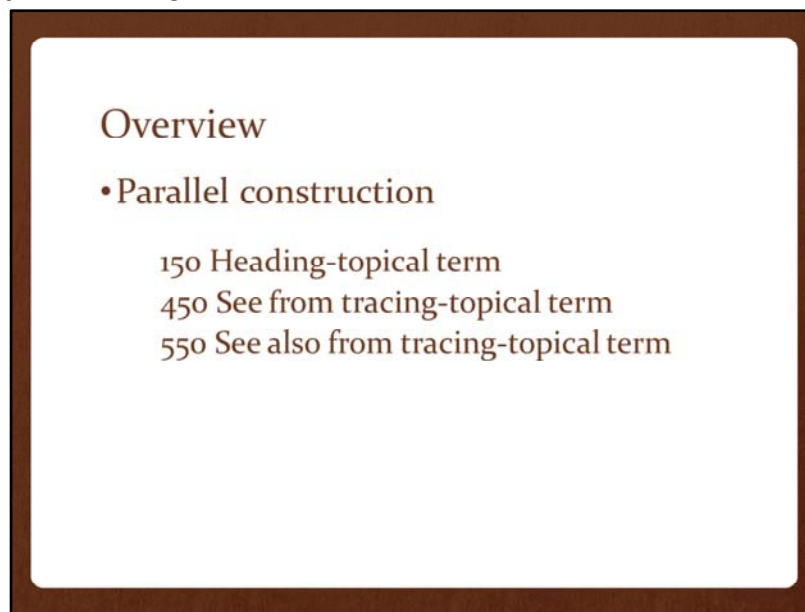
Overview

- Fields used in the NAF and LCSH
 - Free-floating and pattern subdivisions
 - 180 General (topical) subdivisions
 - 181 Geographic subdivisions
 - 182 Chronological subdivisions
 - 185 Form subdivisions

There are also four fields that are used to authorize free-floating subdivisions.

The 180 field is used for topical subdivisions and the 185 field is for form subdivisions.

The 181 and 182 fields, for geographic and chronological subdivisions, respectively, are also used.



Overview

- Parallel construction
 - 150 Heading-topical term
 - 450 See from tracing-topical term
 - 550 See also from tracing-topical term

The 1XX, 4XX, and 5XX blocks have parallel construction, to a large extent. It is easiest to explain this by using some examples.

The 150, 450, and 550 fields are all used for topical terms.

- The 150 is for the topical heading.
- The 450 is for topical term “see from” tracings (called UFs in LCSH).
- The 550 is for topical term “see also from” tracings (the BTs and RTs in LCSH).

Overview

- Parallel construction

150 Heading-topical term

450 See from tracing-topical term

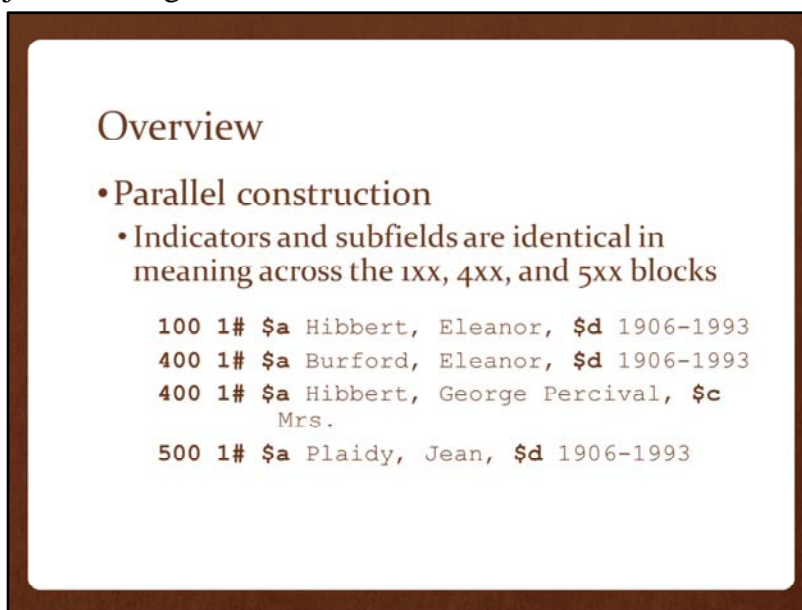
550 See also from tracing-topical term

100 Heading-personal name

400 See from tracing-personal name

500 See also from tracing-personal name

Likewise, the 100 field is for personal name headings, the 400 is for “see from” tracings, and the 500 field is for “see also from” tracings.



Overview

- Parallel construction
 - Indicators and subfields are identical in meaning across the 1xx, 4xx, and 5xx blocks

```
100 1# $a Hibbert, Eleanor, $d 1906-1993
400 1# $a Burford, Eleanor, $d 1906-1993
400 1# $a Hibbert, George Percival, $c
      Mrs.
500 1# $a Plaidy, Jean, $d 1906-1993
```

Within the 1XX, 4XX, and 5XX fields, the indicators and subfields are also parallel.

As you can see in this example, the first indicator is 1 (one) in all of the fields. First indicator 1 in the 100, 400, and 500 fields means that the personal name is provided in inverted order – surname first.

The first subfield is \$a, and contains the name. The subfield \$d contains birth and death dates. The subfield \$c is present in only one of the fields on the screen, and it contains the title associated with the name. If there were a title associated with the name in any of the other fields on the screen, it would be in a subfield \$c, as well.

There is another subfield used in 4XX and 5XX fields: subfield \$w. It can be used to show relationships between headings and references. Please consult LC's documentation for more information about this subfield.

Now that we have introduced the parallel fields, we will explain how some of the other fields are used.

Overview

- **360 Complex see also reference-subject**

- Provides a *general see also* reference in a record for an authorized heading
- Reference to subdivisions or other headings of interest

```
150 ## $a Capitalization
360 ## $i subdivision $a
      Capitalization $i under
      names of languages, e.g. $a
      English language-
      Capitalization
```

The 360 field, officially titled complex see also reference-subject, is used for general SEE ALSO references. Recall from earlier modules that these references appear with authorized headings and show related subdivisions and/or other headings of interest.

The record for **Capitalization**, an authorized heading, provides a general SEE ALSO reference to the subdivision **–Capitalization**, which is used under names of languages.

Overview

- **360 Complex** see also reference-subject

- Provides a *general see also* reference in a record for an authorized heading
- Reference to subdivisions or other headings of interest

```
130 #0 $a Vedas
360 ## $i headings of the type
      [topic] in the Vedas, $i
      e.g., $a Plants in the
      Vedas
```

In this record for the authorized title heading **Vedas**, there is a general SEE ALSO reference to headings in the form **[topic] in the Vedas**.

The slide is titled "Overview" and contains the following content:

- 260 Complex see reference-subject
 - Provides a *general see* reference
 - Used only in records that do not have an authorized heading
 - Although they have a 1xx field

A callout box contains the following text:

Rumanian ...
USE subject headings beginning with or qualified
by the word Romanian

General SEE ALSO references, which we just discussed, are in 360 fields and appear in records for authorized headings.

Field 260, which is used for general SEE references, are used when the 1XX field is not an authorized heading. Yes, that's right – some 1XX fields are not actually authorized for use in bibliographic records.

We discussed these types of references in Module 2.8. Recall that in Classification Web, the reference is not boldfaced the way that headings are, and LCSH provides a USE instruction that instructs you on the correct form of heading to search.

In the example on your screen, *Rumanian ...* is the reference, and the instructions are to “USE subject headings beginning with or qualified by the word Romanian.”

Overview

- 260 Complex see reference-subject

Rumanian ...
USE subject headings beginning with or qualified
by the word Romanian

```
150 ## $a Rumanian ...  
260 ## $i subject headings  
beginning with or qualified  
by the word $a Romanian
```

This is the same entry, but in the MARC format.

Whenever you see a 260 in an LCSH authority record, it means that you may not use the data in the 1XX field as a heading in a bibliographic record.

There are two other clues that this record does not represent a valid heading, and they are both in the fixed field.

Overview

- 260 Complex see reference-subject
- 008/09 Kind of record
Value = b (untraced reference)
- 008/15 Heading use-subject added entry
Value = b (not appropriate)

Byte 9 of the fixed field is set to the value “b,” which means that the record represents an untraced reference, and byte 15 is also “b,” meaning that the 1XX field is not appropriate for use as a subject heading.

Overview

- 260 Complex see reference-subject

ID:	sh 86004944	Entered:	860828	Replaced:	20000224
008/06 Geo Subd:	n-Not applic	008/11 SH System:	a-LCSH	008/29 Ref Eval:	n-Not applic
008/07 Roman:	-No attempt	008/15 Subj Use:	b-Not approp	008/31 Rec Upd:	a-Can be used
008/09 Kind Rec:	b-Untraced ref	008/17 Type Subd:	n-Not applic	008/33 Level Estab:	n-Not applic

010	Sa sh 86004944
035	Sa (DLC)sh 86004944
035	Sa (DLC)149396
040	Sa DLC Sc DLC Sd DLC
150	Sa Rumanian ...
260	Si subject headings beginning with or qualified by the word Sa Romanian

This is the full MARC authority record for *Rumanian*, and as you can see, it has all three markers.

Bytes 9 and 15 of the fixed field are both set to “b,” and the record includes a 260 field.

We want to point out another use for fixed field byte 15, while we are here.

Overview

- 008/15 Heading use-subject added entry
 - Value = b (not appropriate)

```
008/15 = b
151 ## $a Ceylon

008/15 = b
110 1# $a United States. $b
    President (1993-2001 : Clinton)
```

Byte 15 is also set to “b” in some name authority records, when the authorized access point that is represented by the 1XX field cannot be used as a subject heading.

Recall from earlier modules that these include earlier names of jurisdictions when the jurisdiction has undergone a linear name change, corporate name access points for heads of state, and certain uniform titles that include additions like the language, among others.

It is a good idea to get into the habit of looking at byte 15 in name authority records to determine whether the access points can be used as a subject headings. However, be aware that some access points cannot be used as subject headings according to LCSH policy, but byte 15 says they can be (by using value “a”).

Always follow the instructions in the SHM when trying to assign access points as subjects, instead of completely trusting the coding.

The other values that may appear in fixed field bytes 9 and 15 are defined in the full documentation for the MARC authority format.

Now let’s discuss the note fields that are used in LCSH and the NAF.

Overview

- 680 Public general note

- Provides the scope note in LCSH

```
150 ## $a Youth
```

```
680 ## $i Here are entered works on  
the time of life between  
thirteen and twenty-five  
years, as well as on people  
in this general age range,  
including teenagers and  
young adults.
```

The 680 field is officially called the public general note, and in LCSH it is used for the scope note.

As we have emphasized many times in this training, it is always important to read the scope note if one is present.

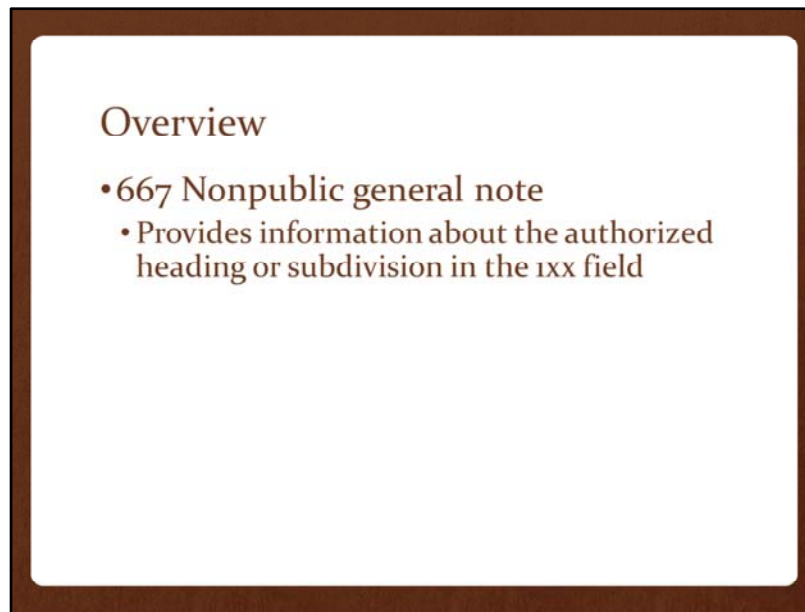
Overview

- 680 Public general note
 - Provides the scope note in LCSH

```
180 ## $x Patients
680 ## $i Use as a topical
      subdivision under
      individual diseases and
      types of diseases.
```

As we have seen, scope notes also appear in the list of free-floating subdivisions.

The scope notes in those records also appear in 680 fields.



The 667 field, which is called the nonpublic general note, provides important information about the heading or subdivision. There are three main uses of this field.

Overview

- 667 Nonpublic general note
 - Provides information about the authorized heading or subdivision in the 1xx field

```
180 ## $x Patients
667 ## $a Further subdivide by
      subdivisions used under
      classes of persons.
```

The field is used in some authority records for subdivisions (the records with a 180, 181, 182, or 185 tag). In these records, the note usually indicates that the subdivision may be further subdivided by subdivisions from another pattern list of subdivisions.

In the example on your screen, the topical subdivision –**Patients**, which is from the pattern instruction sheet for diseases, H 1150, can be further subdivided by subdivisions used under classes of persons, which is instruction sheet H 1100.

Overview

- **667 Nonpublic general note**
 - Provides information about the authorized heading or subdivision in the `ixx` field

180 ## \$x Patients

667 ## \$a Further subdivide by
subdivisions used under
classes of persons.

680 ## \$i Use as a topical
subdivision under individual
diseases and types of
diseases.

For subdivisions, it is particularly important to read the 667 note in conjunction with the scope note in the 680 field to gain a fuller understanding of the subdivision.

But remember, specific instructions about the assignments of the subdivision are found only in the SHM!

Overview

- **667 Nonpublic general note**
 - Provides information about the authorized heading or subdivision in the 1xx field

```
151 ## $a Ceylon
```

```
667 ## $a SUBJECT USAGE: This name  
is not valid for use as a  
subject. Works about this  
place are entered under Sri  
Lanka.
```

In the NAF, the 667 field is sometimes used to provide information on the correct heading to use when there has been a linear jurisdictional name change.

See Module 4.10 of this training if you would like to review the concept of linear jurisdictional name changes.

Overview

- **667 Nonpublic general note**
 - Provides information about the authorized heading or subdivision in the 1xx field

```
151 ## $a Fifth Avenue (New York,  
N.Y.)
```

```
667 ## $a This heading is not valid  
for use as a geographic  
subdivision.
```

The 667 field is also used in both the NAF and in LCSH to indicate that a geographic heading cannot be used as a geographic subdivision.

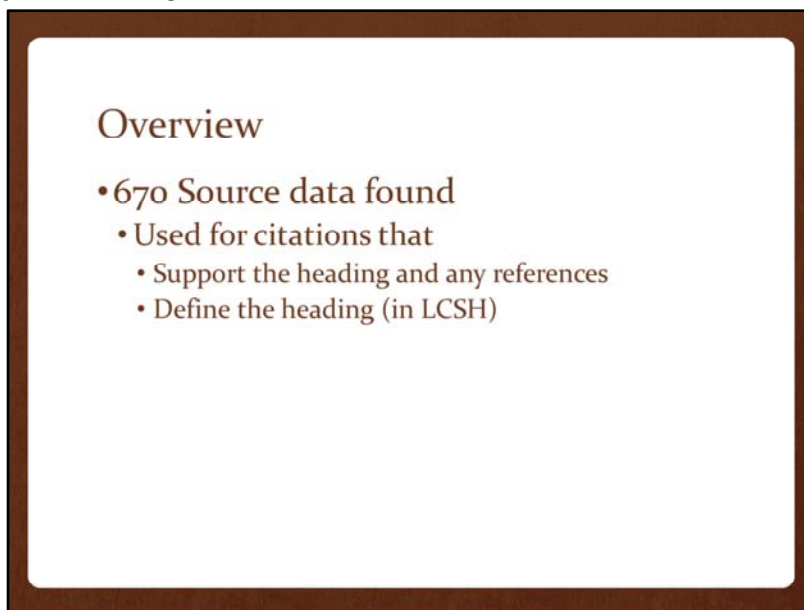
We discussed the use of the note, “This heading is not valid for use as a geographic subdivision,” back in Module 6.13.

Overview

- 781 Subdivision linking entry-geographic subdivision
 - Shows the correct way to reformulate the heading as a geographic subdivision

```
151 ## $a Catskill Mountains (N.Y.)  
781 #0 $z New York (State) $z  
Catskill Mountains
```

Also recall from Module 6.13 that geographic headings have *either* the 667 note explaining that the heading cannot be used as a geographic subdivision *or* a 781 field showing how the heading is reformulated into a geographic subdivision. We have seen numerous examples of the use of the 781 field throughout this entire training.



The 670 field, source data found, is used for a citation to the resource that caused the heading to be made. 670 fields also contain citations of other sources that were consulted, if necessary. The citations support the heading and any references that were made. In LCSH, they also often provide definitions of the heading.

A 670 field is not present in every authority record, and is notably absent in most of the records that were converted from 3" x 5" cards into the MARC format in the 1980s. However, one or more 670s is usually present in the millions of authority records created since then.

If you do not understand the meaning of an LC subject heading and there is not a scope note, it is a good idea to check the 670s for information.

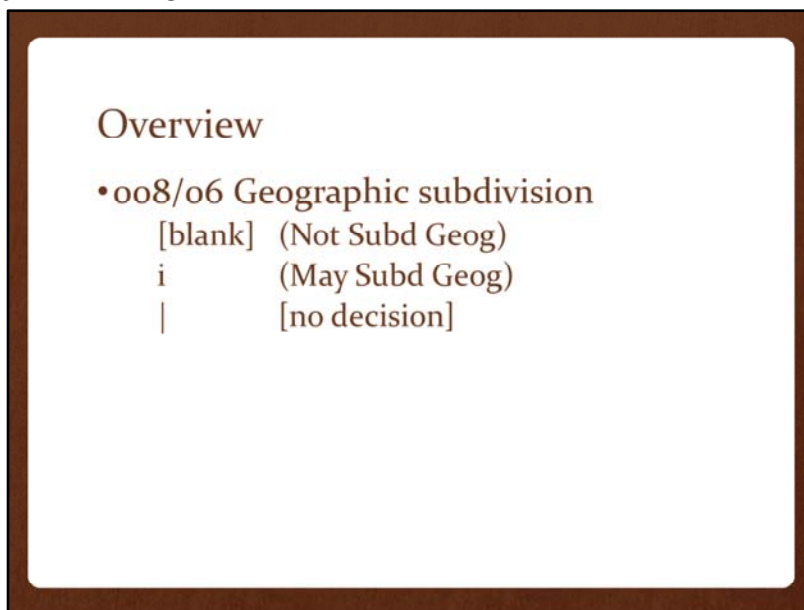
Overview

- 670 Source data found

```
150 ## $a Diseases in the theater
670 ## $a Work cat: 2018010320:
      Conti, M. Playing sick,
      2018: $b CIP galley
      (reconstructs how actors
      embodied three of the era's
      most pervasive and
      provocative illnesses)
```

For example, the source citation in this record for **Diseases in the theater** shows that the resource being cataloged was about how actors portray disease.

You can infer, then, that the heading should be used for resources on the subject of the portrayal of disease onstage. The heading is not about how diseases are transmitted in theaters!



There is one more data element that we should discuss before we explain how headings and access points that appear in authority records are translated into subject access fields of bibliographic records: byte 6 of the fixed field, which shows whether a heading may be subdivided geographically.

There are three values used in LCSH.

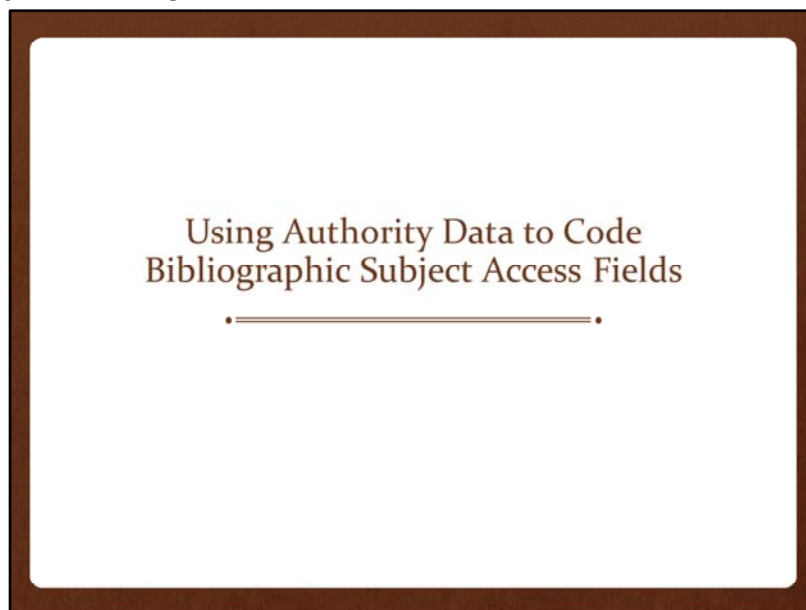
Blank means that the heading may not be subdivided geographically. It generates the legend “Not Subd Geog.”

The value “i” means that the heading may be subdivided geographically, and generates the legend “May Subd Geog.”

The fill character, which is usually represented by a black box or a vertical bar, means “no decision” and does not generate a legend.

If you would like to refresh your memory on the meaning of the three categories – May Subd Geog, Not Subd Geog, and No decision, see Module 6.8 in this training.

Recall that the only time you are permitted to use a geographic subdivision is when you see the legend “May Subd Geog” – and therefore the value “i” appears in this byte of the authority record.

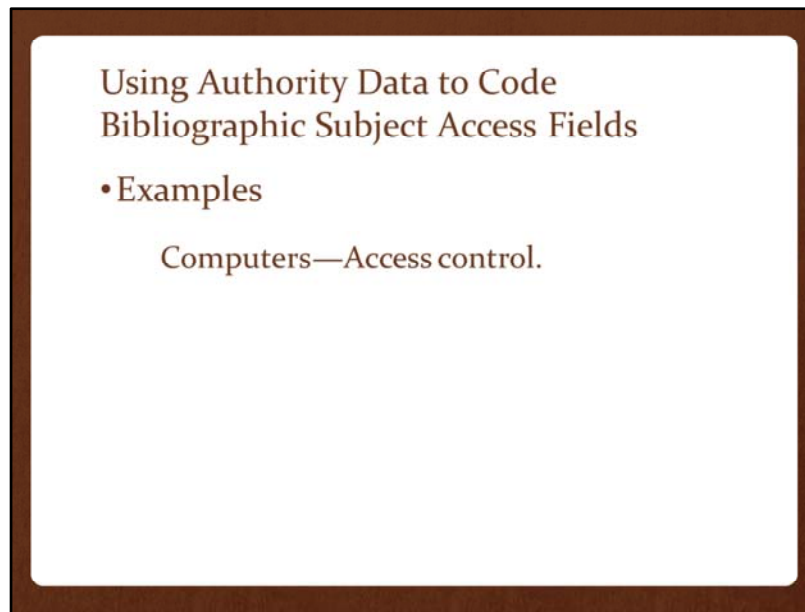


Now that we have discussed the fields that can be considered the most significant when assigning LC subject headings, we would like to show you how to use the authority records as tools to determine the proper MARC coding for the subject access fields in bibliographic records.

Our discussion will begin after the headings have been constructed and need to be coded in MARC format.

Before we get started, we want to assure you that the more you use MARC format, the more the tags, indicators, and subfield codes will become second nature. However, every cataloger has to look up the correct coding occasionally. Using the authority record takes much of the guesswork out of the process.

We will revisit some of the examples from the previous module to demonstrate the process.



The first example is **Computers—Access control**.

The entire heading string is authorized by a single authority record, so the process is very straightforward.

Using Authority Data to Code
Bibliographic Subject Access Fields

- Examples

Computers—Access control.

150 Sa Computers \$x Access control

650 #0 \$a Computers \$x Access control.

As you can see, tag 150 in the authority record turns into a 650 in the bibliographic format.

Using Authority Data to Code
Bibliographic Subject Access Fields

- Examples

Computers—Access control.

150 Sa Computers \$x Access control

650 #0 \$a Computers \$x Access control.

The indicators are blank in the authority file.

The first indicator stays blank in the bibliographic record, but the second indicator turns into a 0 (zero).

The second indicator 0 shows that the heading is from LCSH.

Using Authority Data to Code
Bibliographic Subject Access Fields

- Examples

Computers—Access control.

150 \$a Computers \$x Access control

650 #0 \$a Computers \$x Access control.

The subfield coding is then copied directly from the authority record.

Finally, a period is added to the end of the heading in the bibliographic record.

(Headings in authority records do not end in a period unless the period is needed for grammatical purposes, such as when a heading ends in an abbreviation.)

Using Authority Data to Code
Bibliographic Subject Access Fields

- Examples

Diphtheria—Vaccination—Yemen
(Republic)

```
150 Sa Diphtheria Sx Vaccination
```

```
151 Sa Yemen (Republic)
```

```
781 0 Sz Yemen (Republic)
```

```
650 #0 $a Diphtheria $x Vaccination  
$z Yemen (Republic)
```

For this heading, **Diphtheria—Vaccination—Yemen (Republic)**, we need to consult two authority records.

The heading **Diphtheria—Vaccination** is authorized in a single authority record, and the form of the geographic subdivision is provided in the 781 field of the authority record for **Yemen**.

Using Authority Data to Code
Bibliographic Subject Access Fields

- Examples

Diphtheria—Vaccination—Yemen
(Republic)

```
150 Sa Diphtheria Sx Vaccination
151 Sa Yemen (Republic)
781 0 Sz Yemen (Republic)
650 #0 $a Diphtheria $x Vaccination
      $z Yemen (Republic)
```

As we saw in the previous example, the 150 field becomes a 650.

Using Authority Data to Code
Bibliographic Subject Access Fields

- Examples

Diphtheria—Vaccination—Yemen
(Republic)

150 Sa Diphtheria Sx Vaccination

151 Sa Yemen (Republic)

781 0 Sz Yemen (Republic)

650 #0 \$a Diphtheria \$x Vaccination
\$z Yemen (Republic)

The indicators are changed from two blanks to a blank and a 0 (zero).

Using Authority Data to Code
Bibliographic Subject Access Fields

- Examples

Diphtheria—Vaccination—Yemen
(Republic)

150 \$a Diphtheria \$x Vaccination

151 \$a Yemen (Republic)

781 0 \$z Yemen (Republic)

650 #0 \$a Diphtheria \$x Vaccination
\$z Yemen (Republic)

And the subfield coding is transferred as-is to the bibliographic record.

Using Authority Data to Code
Bibliographic Subject Access Fields

- Examples

Diphtheria—Vaccination—Yemen
(Republic)

```
150 Sa Diphtheria Sx Vaccination
151 Sa Yemen (Republic)
781 0 Sz Yemen (Republic)

650 #0 $a Diphtheria $x Vaccination
      $z Yemen (Republic)
```

Because the heading is already constructed, I'm sure we already verified the format of the geographic subdivision by checking the 781 field.

When we code the subdivision in the bibliographic record, we skip the tag and the indicators and just take the subfield coding and the contents.

Using Authority Data to Code
Bibliographic Subject Access Fields

- Examples

United States. Congress—Committees—
Rules and practice.

110 1 \$a United States. \$b Congress \$x Committees
\$v Rules and practice

610 10 \$a United States. \$b Congress
\$x Committees \$v Rules and
practice.

We have to consult just one authority record for the heading **United States. Congress—Committees—Rules and practice.**

As you should now expect, the 110 turns into a 610.

The first indicator in the 110 field is a 1, so that is carried into the bibliographic record.

The second indicator in the 110 field is a blank, and we have to change it into a 0 (zero) when we move it to the bibliographic record.

All of the subfield coding is copied as-is.

Using Authority Data to Code
Bibliographic Subject Access Fields

- Examples

College students—Massachusetts—
Boston—Economic conditions—21st
century.

150 Sa College students

650 #0 \$a College students \$z
Massachusetts \$z Boston \$x
Economic conditions \$y 21st
century.

Now let's look at **College students—Massachusetts—Boston—Economic conditions—21st century**.

The authority record for the main heading helps us with the tag, indicators, and the first subfield. The tag and the second indicator change, as we have seen several times.

Using Authority Data to Code
Bibliographic Subject Access Fields

- Examples

College students—Massachusetts—
Boston—Economic conditions—21st
century.

781 0 Sz Massachusetts Sz Boston

650 #0 \$a College students \$z
Massachusetts \$z Boston \$x
Economic conditions \$y 21st
century.

The coding and format for the geographic subdivision are provided in the 781 field. Remember, the tag 781 itself is not included in the bib record, only the subfield coding is.

Using Authority Data to Code Bibliographic Subject Access Fields

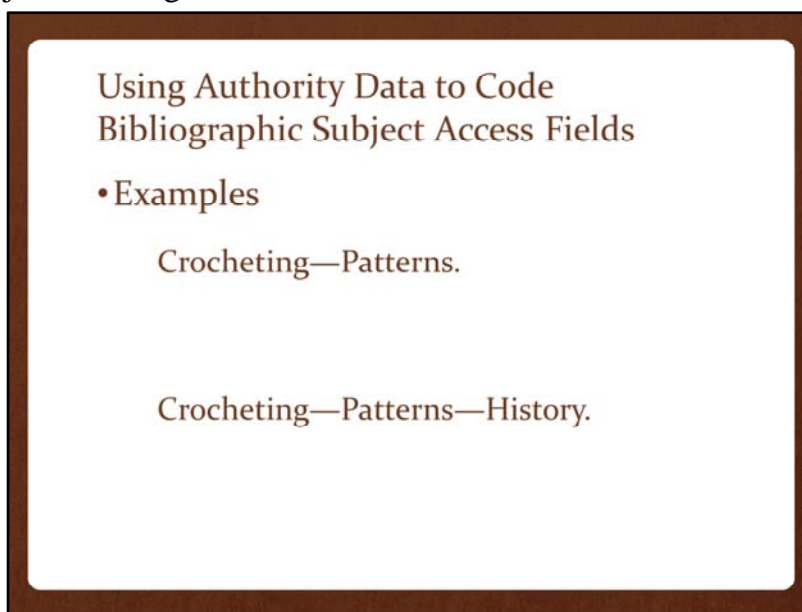
- Examples

College students—Massachusetts—
Boston—Economic conditions—21st
century.

180 \$x Economic conditions \$y 21st century

650 #0 \$a College students \$z
Massachusetts \$z Boston \$x
Economic conditions \$y 21st
century.

And the coding for the topical and chronological subdivisions comes from the authority record for the free-floating subdivision.



Using Authority Data to Code
Bibliographic Subject Access Fields

- Examples
 - Crocheting—Patterns.
 - Crocheting—Patterns—History.

Occasionally, the subfield coding in the authority record is not appropriate for the bib record, and that is because most form subdivisions (that is, subfield \$v) can also be used as topical subdivisions (subfield \$x).

Instead of relying completely on the authority record, you have to use your knowledge of the resource and the meaning that you intend to convey with the subject heading in order to determine the correct coding.

Let's look at two very similar heading strings that have two very different meanings. Recall that **Crocheting—Patterns** is use for resources that *are* crochet patterns, while **Crocheting—Patterns—History** is a resource about the history of crochet patterns.

Using Authority Data to Code
Bibliographic Subject Access Fields

- Examples

Crocheting—Patterns.

150 Sa Crocheting Sv Patterns

650 #0 \$a Crocheting \$v Patterns.

Crocheting—Patterns—History.

The subfield coding, including the subfield \$v, can simply be copied from the authority record for **Crocheting—Patterns**.

The subfield \$v indicates that the resource *is* patterns.

Using Authority Data to Code
Bibliographic Subject Access Fields

- Examples

Crocheting—Patterns.

150 Sa Crocheting Sv Patterns

650 #0 \$a Crocheting \$v Patterns.

Crocheting—Patterns—History.

180 Sx History

650 #0 \$a Crocheting \$x Patterns \$x
History.

However, the coding for the subject heading assigned to the resource that is *about* crochet patterns cannot include a subfield \$v. Instead, you have to use your knowledge to change it into a subfield \$x.

Using Authority Data to Code
Bibliographic Subject Access Fields

—**Platforms**

Use as a form subdivision under names of individual political parties for works containing platforms of those parties.

Use as a topical subdivision under names of individual political parties for works about platforms of those parties.

We have just one caution for you before we finish this module, and it also relates to the use of form subdivisions as topical subdivisions.

Recall that in the free-floating and pattern list of subdivisions in Classification Web, such dual-use subdivisions have two scope notes: one indicating that it is used as a form and the other indicating that it is a topic.

In cases like this, the authority record retrieved will always be for the form subdivision.

The text of the scope note makes it clear that the subfield \$v should be changed to a subfield \$x when you want to use the subdivision as a topic.