

SCS Policy Recommendations on Non-Latin Script Cross-Reference Special Coding Practice in the LC/NACO Name Authority File

PCC Standing Committee on Standards

Apr 12, 2023 **SECOND REVISED DRAFT**

Background

The [Report on Non-Latin Script Cross-reference Coding Practice in NACO Name Authority File](#) from the PCC Standing Committee on Applications (SCA), dated September 7, 2022, recommended abolishing the special coding practice for MARC 008/29 and 667 note in NARs that contain non-Latin script cross-references. In response, on September 9, 2022, the PCC Policy Committee (PoCo) charged the Standing Committee on Standards (SCS) to develop policy recommendations in support of this change.

SCS considered two possible implementation scenarios for this recommendation:

Scenario 1: Abolish the special coding practice entirely and retroactively. Update all records with non-Latin script references to standard coding (008/29=a and delete 667 notes indicating the presence of Non-Latin references and/or Machine-derived non-Latin script references) in all cases, whether or not the non-Latin references have actually been evaluated by a cataloger. For example, perform a batch update across the LC/NACO Name Authority File (LCNAF) to change the 008/29 code and delete related 667s in all records where they occur.

Scenario 2: Implement standard coding in evaluated records, but retain the special coding in those that have not yet been fully evaluated.

- a. In newly established records with non-Latin script references, or when adding non-Latin script references to an existing record which did not previously contain them: implement standard coding practice (008/29=a and omit 667 notes indicating the evaluation status of Non-Latin references)

- b. In existing records in which all non-Latin references have been evaluated: Update the record to standard coding practice (008/29=a and delete or omit 667 notes indicating the evaluation status of Non-Latin references and/or Machine-derived non-Latin script references)
- c. In existing records in which some or all non-Latin references have not yet been evaluated: retain the special coding (008/29=b and 667 notes indicating the evaluation status of Non-Latin references and/or Machine-derived non-Latin script references), when editing a record for another reason.

In particular, references generated by machine-derived processes (including those identified by the 667 note "Machine-derived non-Latin script reference project"), or by transliteration macros, may more likely reflect errors that require further cataloger intervention. Possibly, specific NACO funnels and/or other language-based groups or experts may evaluate these non-Latin references and update records to the new coding practice over time, whether on encounter or as part of special projects. For example, many CJK references have already been evaluated by the CJK NACO References Project. Additional subsets of records that meet certain criteria (such as those without the 667 note "Machine-derived non-Latin script reference project") might be considered evaluated and batch-updated to the new coding.

Otherwise, evaluation and recoding is **not required**. Catalogers should leave the existing special coding in place if they cannot or choose not to evaluate all the non-Latin script references when editing a record for another reason.

SCS reconsidered issues originally presented in the PCC white paper: [*Issues Related to Non-Latin Characters in Name Authority Records*](#) (December 2007). SCS also consulted with SCA and with various non-Latin script cataloging communities, including the CJK, Arabic, and Hebrew NACO Funnels, the Slavic SACO Funnel, the ACRL ESS Slavic Cataloging and Metadata Committee (SCMC), and the ALA Core Committee on Cataloging: Asian and African Materials (CC:AAM). Feedback received from these communities demonstrated a preference for scenario 2, and SCS has developed the following proposed revisions accordingly.

Assuming an anticipated publication of these revisions to LC-PCC documentation on **August 15, 2023**, we use this date in the revisions below, and propose also that this date be considered "Day 1" for the new practice, so that dependent announcements and revisions to FAQs, NACO funnel manuals, etc. can also be completed in the intervening time and aligned with that date if possible. Further recommendations about next steps to be completed are discussed in the "Other Comments" section below.

Proposed Revisions

In support of scenario 2 described above, SCS has developed proposed revisions to the following documents:

1. Descriptive Cataloging Manual Z1 (DCM Z1):
 - a. 008/29 Reference Evaluation (new)
 - b. 667 Nonpublic General Note
2. NACO Participants' Manual:
 - a. Fixed fields
 - b. 667 - Nonpublic general note
3. LC Guidelines Supplement to the MARC Authority Format:
 - a. 008/29 Reference Evaluation

Note: Proposed changes are highlighted in **red**; proposed additions are indicated with **underline** and deletions are indicated with **strikethrough**. Unrevised sections of the documents are omitted for brevity.

1. Descriptive Cataloging Manual Z1

1a. 008/29 Reference Evaluation [new section]

008/29 Reference Evaluation

General

Use 008/29 code “n” for NARs with no cross-references.

Use 008/29 code “a” for NARs in which all cross-references are evaluated, including non-Latin script references.

Do not use 008/29 code “b” in newly created NARs as of August 15, 2023. Code “b” may occur in LC records created before the adoption of AACR 2 in Jan. 1981. Code “b” may also occur in name and series authority records with non-Latin script references created before August 15, 2023, until those references have been evaluated and the authority record is updated.

See also the DCM Z1 667 section on Non-Latin script reference notes.

1b. 667 Nonpublic General Note

Non-Latin script reference notes

~~If in~~ an authority record ~~that~~ contains ~~a~~ non-Latin script variant access points which have not yet been evaluated, ~~retain use~~ the 667 field with the a-note stating: “Non-Latin script reference not evaluated.” ~~If there are multiple non-Latin script variant access points, use the note stating: or~~ “Non-Latin script references not evaluated.”

If some but not all non-Latin script variant access points have been evaluated, update the 667 note to indicate which variant access points have been evaluated and which have not, if possible.

Retain also any related 667 notes such as “Machine-derived non-Latin script reference project.”

Retain Assign 008/29 value “b” to indicate that the variant access points have is-not been evaluated.

Examples:

008/29 = b

100 1# \$a Xi, Jinping

400 1# \$a 习近平

400 1# \$a 習近平

667 ## \$a Non-Latin script references not evaluated.

008/29 = b

667 ## \$a Greek and Cyrillic script references evaluated. Other non-Latin script references not evaluated.

008/29 = b

667 ## \$a Machine-derived non-Latin script reference project.

667 ## \$a Cyrillic and Japanese script references evaluated. Hebrew script references not evaluated.

Only after all non-Latin script variant access points have been evaluated should you delete the associated 667 field notes and assign 008/29 value “a” to indicate that all variant access points have been evaluated and deemed consistent with the authorized access point.

Example:

008/29 = a

100 1# \$a Cavafy, Constantine, \$d 1863-1933

400 1# \$a Kavaphēs, Kōnstantinos, \$d 1863-1933

400 1# \$a Καβάφης, Κωνσταντίνος, \$d 1863-1933

See also DCM Z1 008/29

2. NACO Participants' Manual

2a. Fixed Fields (page 23)

Reference evaluation (008/29)

a - record includes cross-references (4XX or 5XX), all of which have been evaluated unless one or more is in a non-Latin script

b - record includes unevaluated references ~~that must be revised if record is being updated~~; do not use in newly-created records ~~except for records with references in non-Latin scripts~~

n - record includes no cross-references

2b. 667 - Nonpublic general note (page 68)

667 ## \$a Non-Latin script references not evaluated.

(Prior to August 15, 2023, notes about the evaluation status of non-Latin script references were included in records with non-Latin script references. These notes may be adjusted to indicate partial evaluation, and removed once all of the non-Latin script references have been evaluated.)

3. LC Guidelines Supplement to the MARC Authority Format:

3a. 008/29 Reference Evaluation

NACO:

Do not use codes:

fill character

Code “b” may occur in records created before the adoption of AACR 2 in Jan. 1981 and will continue to exist until any records containing reference tracings have been evaluated and the authority record updated.

Code “b” will also occur in all name/series records with non-Latin script references created before August 15, 2023 that have not yet been evaluated. ~~until guidelines for evaluating non-Latin script references are developed.~~ When code “b” is used in this latter case, assure that a 667 note with the statement: "Non-Latin script reference not evaluated" or "Non-Latin script references not evaluated", or a statement indicating partial evaluation such as "Non-Latin script references in Greek and Cyrillic scripts evaluated. Other non-Latin script references not evaluated". is also present in the NAR.

LC:

NAMES/SERIES:

Do not use codes:

fill character

Code “b” may occur in LC records created before the adoption of AACR 2 in Jan. 1981 and will continue to exist until any records containing reference tracings have been evaluated and the authority record updated.

Code “b” will also occur in all name/series records with non-Latin script references created before August 15, 2023 that have not yet been evaluated. ~~until guidelines for evaluating non-Latin script references are developed.~~ When code “b” is used in this latter case, assure that a 667 note with the statement: "Non-Latin script reference not evaluated" or "Non-Latin script references not evaluated", or a statement indicating partial evaluation such as "Non-Latin script references in Greek and Cyrillic scripts evaluated. Other non-Latin script references not evaluated". is also present in the NAR.

Other Comments

Evaluation Guidelines

To support this implementation approach, SCS considered what additional documentation would actually be needed to clarify the meaning of “evaluation” and to provide guidance on how non-Latin script references are to be evaluated and by whom. The NACO Participants’ Manual defines reference evaluation as “the process of examining and adjusting the cross-references and related fixed field codes in an

existing authority record to bring them up to RDA standards.” Compared to AACR2, RDA provides relative latitude for cataloger judgment and community-developed best practices regarding the number and formulation of optional variant access points, including language and script variants. Many RDA-compliant NACO records containing only Latin script references are coded 008/29=a (“Tracings consistent with the heading”), and those references exhibit a variety of practice. So, while further best practices remain to be agreed upon by the PCC and the various non-Latin script cataloging communities involved (as addressed below in the “Next Steps”), we recommend that those guidelines will continue to evolve and do not need to be finalized before the above proposed revisions can be published in support of allowing records to be updated to the standard coding (008/29=a).

As a starting point, we suggest that one desired outcome of this change in practice is for there to be fewer exceptions and special rules for non-Latin scripts, not more. So, in general, “evaluated” in this context indicates that any non-Latin script references present in the record are judged to meet the same general RDA and NACO standards as any Latin script references would.

For example:

- The references refer to the entity named in the 1XX (and not another entity)
- The references have been checked for accuracy (spelling, letterforms, capitalization, punctuation, spacing, diacritics, etc.), especially if they were originally machine-generated or supplied by a transliteration macro
- The references are formulated and encoded according to applicable guidelines and instructions from RDA, the LC-PCC Policy Statements, DCM Z1, etc. For example:
 - access point elements are in the correct order
 - qualifiers conform to applicable instructions in RDA and PCC guidance for additions to variant access points
 - the references are justified by usage recorded in a 670 when required (see DCM Z1 670 “Justifying variant access points” and the NACO Participants’ Manual)
 - the references do not normalize to the same form as a 4XX on the same record or a 1XX/5XX on the same or any other name authority record according to [NACO normalization rules](#)¹

¹ [NACO normalization rules](#) were previously revised to [take non-Latin scripts](#) into account. Since non-Latin scripts are still not allowed in 1XX or 5XX fields, and since a 4XX is allowed to conflict with a 4XX on another record, conflicts are generally only a concern when a non-Latin 4XX would normalize to the same form as another 4XX on the same record (for example, 4xxs in Greek script that differ only in diacritics and capitalization).

- the MARC tagging is correct

Catalogers should evaluate and make any necessary corrections to 4XX and supporting 670 fields, before the special coding is removed. For example, catalogers may correct letterforms, edit non-Latin script references that were misformulated, remove those that are redundant, or supply supporting usage in 670 fields.

Though not required as a condition of removing the special coding, catalogers may also consider additional enhancements to support best practice while evaluating the record. For example, catalogers may optionally add additional references in original scripts corresponding to existing romanized references in the record, or in romanized forms corresponding to existing non-Latin script references, formulated following the appropriate [ALA-LC Romanization Tables](#) when available. In some languages and scripts (such as classical names in Arabic script), additional references in direct order may also be appropriate.

For new or revised records, if a cataloger does not have the language or script expertise to construct valid references from the source data found, or to evaluate macro-supplied references, catalogers may instead record usage from the source data in 670 \$b without including references based on that usage.

Next Steps

The above recommendations are general guidelines. More specific guidance on evaluation has been awaited by the non-Latin script cataloging community since 2008. Substantial experience has been gained in the past 15 years, and our standards and technical infrastructure have also changed substantially since then. Evaluation guidelines informed by this progress will help articulate and reinforce community best practices going forward.

So, we recommend that the PCC consult with the CJK, Arabic, and Hebraica NACO Funnel Projects, or other language-based communities such as the Slavic SACO Funnel Project or the ALA Committee on Cataloging: Asian and African Materials (CC:AAM) or the ACRL European Studies Section's Slavic Cataloging and Metadata Committee (SCM), in order to support the development of evaluation guidelines, FAQs, and training documentation as needed. Possibly, a survey could identify community needs and preferences. Or, a task group with representatives from various PCC standing committees and funnels could be charged to complete any needed work. Fortunately, substantial documentation already exists, including [Arabic NACO Manual](#),

[CJK NACO Best Practices](#), and [Slavic Cataloging Manual](#), so it will not be necessary to start from scratch.

In consultation with LC and PCC and the NACO nodes, these groups may also be able to identify subsets of records amenable to batch updating to standard coding; for example, those that have already been evaluated by the CJK NACO Funnel Project (as indicated by the 667 note "Non-Latin script references reviewed in NACO CJK Funnel References Project"), or certain records that do not contain the 667 note "Machine-derived non-Latin script reference project."

To the extent possible, these groups may wish to prepare and issue supporting documentation in alignment with the proposed "Day 1" of August 15, 2023. As these evaluation guidelines are developed, it may be necessary to propose additional revisions to the DCM Z1, LC Guidelines and NACO Participants Manual, particularly in the sections regarding 4XX fields, or to revise or develop secondary documentation such as FAQs and examples. Cataloging clients may need to update validation tables and macro scripts in support of these changes, as well.

In anticipation of this work, a placeholder could be included in the relevant 4XX sections of the DCM Z1, LC Guidelines and NACO Participants Manual at this time, such as "See also the PCC Guidelines on Evaluation of Non-Latin Script References in NARs", with a link added once those guidelines are available. Alternatively, "Day 1" could be deferred from August 15, or left unspecified until sufficient evaluation guidelines are issued and integrated into the documentation.

While seeking to minimize exceptions, Non-Latin script references may continue to necessitate special treatment not applied to Latin-script references. While substantial technical improvements have been made since non-Latin scripts were first introduced into the NACO authority file 15 years ago, indexing and display of non-Latin script data still vary widely in different discovery systems. Machine processes and macros can supply and transliterate both Latin script and non-Latin script references, though the output of these processes are more reliable for some languages and scripts than others. Some romanization schemes provide more reliable proxies for the original scripts than others. Still other considerations may vary from script to script or from language to language, or between left-to-right vs. right-to-left scripts. Also, the representation of scripts in the LCNAF varies substantially, with roughly 600,000 records containing CJK scripts but only about 14,000 containing Greek, meaning that the scope of evaluation and maintenance work will vary considerably for the different script-based cataloging communities. Therefore, a single set of evaluation guidelines or strategies may not be applicable for all cases.

Among the issues we recommend be further explored in future recommendations is the question of whether to retain the exception in the DCM Z1, 4XX section: "Use the established form of components in 4XX variant access points, except for non-Latin script variants, which may represent a mixture of scripts or may be entirely in a non-Latin script." Removing this exception would bring non-Latin script references into greater alignment with current practice for Latin-script references, but would require significantly more maintenance work by non-Latin script communities to reformulate references during evaluation, and may have other unintended consequences.

For example:

For hierarchical elements in corporate names, catalogers would need to delete references with a non-Latin script form of parent body names, or convert them to an unsubfielded string without \$b, and may need to adjust separating punctuation, capitalization, and order of components etc., based on usage. The non-Latin script form of the parent body name may instead be included as a variant in the NAR for the parent body.

Examples:

110 2# \$a Romanized parent body. \$b Romanized department name

410 2# \$a Romanized parent body. \$b Non-Latin script department name [VALID]

410 2# \$a Non-Latin script parent body. \$b Non-Latin script department name [NO LONGER VALID in an evaluated record; this reference needs to be removed or adjusted if present; the non-Latin script name of the parent body can be represented in a 410 on the parent body NAR]

410 2# \$a Non-Latin script parent body, Non-Latin script department name [VALID only in a single subfield and if supported by usage]

110 2# \$a Jāmi‘at al-Basrah. \$b Kullīyat al-Tibb

410 2# \$a Jāmi‘at al-Basrah. \$b كلية الطب [VALID]

410 2# \$a كلية الطب، جامعة البصرة. [VALID only in a single subfield and if supported by usage]

410 2# #a جامعة البصرة. #b كلية الطب [NO LONGER VALID in an evaluated record; this reference needs to be removed or adjusted if present; the non-Latin script name of the parent body can be represented in a 410 on the parent body NAR]

110 2# \$a Sankt-Peterburgskii gosudarstvennyi universitet. \$b Fakul’tet psikhologii

410 2# \$a Sankt-Peterburgskii gosudarstvennyi universitet. \$b Факультет психологии [VALID]

410 2# \$a Санкт-Петербургский государственный университет, Факультет психологии. [VALID only in a single subfield and if supported by usage]

410 2# \$a Санкт-Петербургский государственный университет. \$b Факультет психологии [NO LONGER VALID in an evaluated record; this reference needs to be removed or adjusted if present; the non-Latin script name of the parent body can be represented in a 410 on the parent body NAR]

Similarly, name/title variant access points based on a non-established form of name would need to be deleted, adjusted, or converted to title-only variant access points (430) based on usage. The non-Latin script form of the author name may instead be reflected in the NAR for that author.

Examples:

100 1# \$a Romanized name. \$t Romanized title

400 1# \$a Romanized name. \$t Non-Latin script title [VALID]

430 0# \$a Non-Latin script title [VALID]

400 1# \$a Non-Latin script name. \$t Non-Latin script title [NO LONGER VALID in an evaluated record; this reference needs to be removed or adjusted if present; the non-Latin script name can be represented a variant on the name-only NAR for the author]

100 1# \$a Kazantzakis, Nikos, \$d 1883-1957. \$t Christos xanastaurōnetai

400 1# \$a Kazantzakis, Nikos, \$d 1883-1957. \$t Χριστός ξανασταυρώνεται [VALID]

430 0# \$a Χριστός ξανασταυρώνεται [VALID]

400 1# Καζαντζάκης, Νίκος, †d 1883-1957. \$t Χριστός ξανασταυρώνεται [NO LONGER VALID in an evaluated record; this reference needs to be removed or adjusted if present; the non-Latin script name can be represented as a variant on the name-only NAR for the author]

Additional guidance on the form of qualifiers (dates, occupations, terms of rank/honor, location of conference, type of corporate body, etc.) in non-Latin script variants, including right-to-left scripts, may also be needed, in order to determine which are truly invalid, which are acceptable, and which are encouraged by best practice.

Examples:

111 2# \$a Mu'tamar al-Sanawī li-Markaz al-Khalīj lil-Dirāsāt \$n (14th : \$d 2014 : \$c Sharjah, United Arab Emirates)

411 2# \$a مشاركة دولة الإمارات العربية (14th : \$d 2014 : \$c مؤتمر السنوي لمركز الخليج للدراسات المتحدة)

411 2# \$a مؤتمر السنوي لمركز الخليج للدراسات \$n (14th : \$d 2014 : \$c Sharjah, United Arab Emirates)

100 1# \$a Arkevolty, Shmuel, \$d 1515-1611
 400 1# \$a Archivolti, Samuel, \$d 1515-1611
 400 1# \$a Archevolti, Samuel, \$d 1515-1611
 400 1# \$a Arķevolti, Shemu'el, \$d 1515-1611
 400 0# \$a Shemu'el ben Elĥanan Ya'aķov, †c min ha-Arķevolti, \$d 1515-1611
 400 1# \$a שמואל , ארכבולטי, \$d 1515-1611
 400 1# \$a ארקוולטי, שמואל
 400 1# \$a ארקוולטי, שמואל בן אלחנן יעקב, \$d 16111515-
 400 1# \$a 1611-1515, שמואל, ארקוולטי
 400 1# \$a ארקוולטי, שמואל, \$d 15151611-
 400 1# \$a ארקוולטי, ש.
 400 1# \$a מן הארקוולטי \$c, שמואל בן אלחנן יעקב, \$c

100 1 - Shtra'us, M. †c (Illustrator)
 400 1 - †a מ. שטראוס, †c (מאייר)
 400 1 - †a מ. שטראוס, †c (Illustrator)

100 0 Alexandru †b IV Lăpușneanu, †c Voivode of Moldavia, †d active 1552-1568
 400 1 Lăpushnîianul, Aleksandr, †c Voivode of Moldavia, †d active 1552-1568
 400 1 Лăпушнăнул, Александр, †c Воиводе оф Молдавăи, †d a∎тиве
 1552-1568 [transliteration macro transliterated \$c and \$d; needs manual editing]
 400 1 Лăпушнăнул, Александр, †c Voivode of Moldavia, †d active 1552-1568
 [correct form]

It was observed in 2008 that there have not been uniform practices for formulation of parallel non-Latin headings in bibliographic records, and that this lack of uniformity would be reflected in pre-population of the authority file. A brief observation period (through [January 1, 2009](#)) was instituted, to give catalogers time to develop future best practices and provide feedback. Until such guidelines were developed, there was no “right” or “wrong” approach. Instead, catalogers were encouraged to exercise caution and flexibility; seemingly redundant references were generally to be left alone, other than obvious typos or references populated on the wrong record. In addition to exhibiting substantial variation in formulation, as in the preceding examples, some non-Latin 4XXs may directly parallel a romanized form in 1XX (or another 4XX), while others may have no exact romanized equivalent in the record.

As noted in the [White Paper](#) and in the [PCC Non-Latin FAQ](#), “no attempt will be made to signal any one of the references as the valid non-Latin form for the 1XX heading. The White Paper also indicated that this was a “short term goal to allow non-Latin references without declaring whether that reference was the preferred form for any particular language or script” but anticipated that this could be possible in the future. Based on

years of experience gained since this observation period, it may be worth considering whether there is a need to convey such a preference, and if so, how. Placing a preferred non-Latin reference first in the record has been discussed as a way to indicate a preferred form, but field order is not stable nor a reliable way to convey this preferred status, either for catalogers or machines. Other options could include:

- indicating the status of non-Latin variants using 4XX \$w (control subfield) and/or \$7 (data provenance), and proposing new codes for those subfields if needed.
- reconsidering “Model A” for [multiscript records in the MARC Authority Format](#), enabling the use of field 880 to associate specific variants with their romanized equivalents in 1XX or 4XX. This change would be a major departure from current practice, but could also support parallel non-Latin forms in other fields in NARs (3XX, 5XX).

While SCA’s report primarily discussed the potential impact of the change in coding on potential automated “flips” of non-Latin script access points in bibliographic records, SCS also considered the impact of this change on search and retrieval of authority records containing non-Latin scripts. We note that, beyond the presence of the non-Latin script itself (in 4XX and 6XX fields), there is no other explicit coding (such as an 066 field or other fixed field code) indicating the presence of non-Latin scripts in the record. Nonetheless, retrieval of records containing non-Latin scripts is available in OCLC/Worldcat using the Character Sets Present search index (label vp:) with the assigned code for a script (vp:ara for Arabic script; vp:cjk for CJK scripts; vp:cyr for Cyrillic; vp:gre for Greek; vp:hbr for Hebrew). This search index works also in bibliographic records for a larger range of scripts based on [codes in the 066 field](#) including both ISO 15924 and MARC-8 codes. Other systems may implement their own methods for indexing, retrieving and displaying authority and bibliographic records based on script, but we are not aware of any system using the 008/29 coding for searching, retrieval, or display functionality.

On September 21, 2022, [the Library of Congress announced](#) it will be implementing the FOLIO system. It is not yet known by SCS whether this change will enable additional non-Latin scripts in Unicode beyond the current [MARC-8 repertoire](#) (Japanese, Arabic, Chinese, Korean, Persian, Hebrew, Yiddish, Cyrillic, and Greek, or “JACKPHY+CG”), to be used in the LCNAF, such as Armenian, Bengali, Cherokee, Devanagari, Georgian, Syriac, Tamil, Thai, Tibetan, and Unified Canadian Aboriginal Syllabics. Such a change could also support the input of additional characters belonging to “JACKPHY+CG” and Latin scripts that cannot currently be input in LCNAF records; for example: certain characters in Central Asian and Azerbaijani languages in Latin and Cyrillic scripts (such as Ə ə, Ғ ғ, Ү ү in Kazakh), unsupported Chinese characters, the German Eszett, currency symbols (€, ¢), etc. SCS encourages LC to work with the other NACO nodes

and the PCC as needed to pursue this desired outcome, which aligns with PCC's strategic goals of internationalization, diversity, equity, and inclusion. A wider variety of scripts in the Unicode character set are already supported in bibliographic records in OCLC and SkyRiver. If and when additional scripts are implemented in the LCNAF, it may be necessary to consider again at that time how those additional scripts are to be evaluated, retrieved, displayed, and maintained by various systems. It may also be important to consider whether new guidelines are needed specific to those scripts, as well as whether new macros or machine processes can assist catalogers in supplying and romanizing those scripts in authority records.