Notes on Operations
Extending Name Authority Work beyond the Cataloging Department

A Case Study at the University of Nevada, Reno Libraries

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The University of Nevada, Reno Libraries' Metadata and Cataloging Department partnered with the Special Collections and Digital Initiatives departments to obtain NACO certification. To meet the needs of our users and better represent Nevada figures in the Library of Congress Name Authority File, the three departments collaborated to create a new workflow and a tool that effectively extended name authority work and record contribution beyond traditional MARC cataloging.

Recent technological and cultural changes have led to an increasingly networked world. At the same time, information overload creates the potential for lack of clarity, muddled context, and false information offered (inadvertently or advertently) as fact. In this environment, it has become even more important for librarians to provide the kind of trustworthy information for which we have become known. Those in the cataloging and metadata arenas are keenly aware of the need to prepare for a future in which linked library data requires more diligence in discerning and disambiguating the identity of the creators of intellectual property and records. To provide access to rare and unique materials, archivists, special collections librarians, and digital collections experts can learn from catalogers and adapt their name authority tools and workflows to meet their own needs in information management.

It is important for those who create metadata to consult and use the available cooperative databases such as OCLC Connexion and the Library of Congress Name Authority File (LCNAF). Traditional MARC catalogers have long recognized the value of established name authorities, but this valuable information is often overlooked by non-MARC metadata creators in special collections, archives, and digital collections. Considering the uniqueness and local value of materials housed or exhibited in special collections, or online in digital asset management systems, search and retrieval of these materials need to occur with precision and quality; to ensure this it is vital to adhere to national name authority standards. If an institution considers the holdings of its repository as a local or internal resource, it might be acceptable to create metadata without intending it to interact with that of other institutions. However, as special collections and digital collections are increasingly shared with broader audiences through regional archival consortiums such as the Online Archive of California and Archives West, and digital aggregators such as the Digital Public Library of America (DPLA), it becomes each institution's responsibility to make their

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materials, and the creators of those materials, discoverable on a broad national and international level.

When archivists and digital collections librarians view their own holdings in this wider context, their vision of the collective library and archives universe is expanded. The need for that expanded view is clear when it comes to name authority work. There is not just one "John Smith" represented in one archive—there are many "John Smiths" represented across many archives. How do users determine which one is the John Smith whose papers are held at a certain repository or locate the precise John Smith they are seeking? Not only should individual institutions distinguish their records' creators from others, they should share this work in established databases such as the LCNAF. LCNAF's role as a compilation of creator information that has been collaboratively gathered and collectively maintained has the potential to reduce metadata creators' workload in special and digital collections while connecting more users to the information for which they are searching. When other authority systems, including those using non-MARC metadata, draw content from LCNAF records, it is unnecessary for individual institutions to duplicate that work. Rather, they can make valuable contributions by adding to the LCNAF and maintaining it with their own institution's knowledge, providing a solid starting point for public-facing name authority work in the anticipated linked data future.

It was with these goals in mind in spring 2017 that the University of Nevada, Reno's Metadata and Cataloging Department embarked on a project to extend name authority work beyond the department and into the metadata universes and workflows of the special collections and digital initiatives departments.

Literature Review

MARC and non-MARC metadata creators in the library and archives professions frequently encounter anti-metadata attitudes exhibited by those who declare that Google and keyword searching negate the need to do authority work. The LC Working Group on the Future of Bibliographic Control offered a contradictory statement: "While such mechanisms as keyword searching provide extremely useful additions to the arsenal of searching capabilities available to users, they are not a satisfactory substitute for controlled vocabularies. Indeed, many machine-searching techniques rely on the existence of authoritative headings even if they do not explicitly display them."[1] Although most catalogers understand the usefulness of authority records, a review of the literature reveals that little focus has been placed on the use of controlled vocabularies, particularly name authority headings, in special or digital collections. Thus, the practice

of name authority control beyond a traditional cataloging department cannot yet be said to be evolved or established.

The authors of this case study approached the literature with a variety of questions: Who outside of cataloging departments is using authority data? Is it being used in a regular and consistent manner? How are non-catalogers handling authority data internally? Cataloging departments have legacy tools and workflows for handling name authority work and creation, but special collections and digital repositories manage name authorities in ways that vary so greatly it suggests there is no industry standard outside of MARC cataloging practice.

Nearly two decades ago, Vellucci argued for the need for authority control in the non-MARC metadata environment. She asserted that success depended upon implementing "the controlled vocabulary, uniform access points and syndetic structure created by the authority control process."[2] While authority control in non-MARC metadata has not yet been fully embraced or implemented, periodic examples of collaboration and calls for more have appeared. Baca and O'Keefe describe a cross-community approach in which catalogers and curators collaborated on authority records for Medieval and Renaissance materials at the Morgan Library and Museum. Whereas curators accepted cataloging standards including AACR2 and LCSH, they also made useful recommendations to catalogers creating authority records to submit to LCNAF. They concluded that

> this kind of contribution from curators and other subject experts can enhance the intellectual value of records, while helping to cut time and costs for creating high-quality descriptive metadata. The incorporaton of input from creators, scholars, and other subject experts is an area that institutions should actively pursue, if they want to provide rich, accurate descriptions of the non-bibliographic works in their collections. Information from non-cataloger subject experts could be routinely captured if there are effective methods for communication and collaboration between catalogers and curators."[3]

Diao and Hernandez later encouraged catalogers to redefine their roles to collaborate with digital projects librarians to extend their legacy values of accuracy, consistency, and completeness to the metadata being created for digital projects. "Through collaboration with other metadata professionals, catalogers may be able to turn metadata creation into a community practice with individual engagement at different professional levels."[4]

Diao and Hernandez acknowledge that systems are not in place for easy authority control for digital projects: "Even though many cultural institutions involved in digital

projects have been awakening to the significance of authority-control mechanisms in software that helps them build digital collections, unfortunately this problem still remains mostly unsolved." Despite Dublin Core metadata and standard digital asset management system tools providing little to no authority control, some digital collection metadata projects are rooted in the authority practices established in cataloging departments. For example, Dragon describes how metadata creators for the Eastern North Carolina Postcard Collection chose to apply LC Subject Headings (LCSH) and LCNAF vocabularies to align the collection with existing metadata for other items in the repository. Many of the original materials in the collection were digitized books that had LCSH and LCNAF terms assigned to them. The creators decided to continue the practice to maintain consistency and make "the repository more compatible with the library catalog."[5] Other institutions create identical fields and use local shared vocabularies across all digital collections to ensure consistency within their own institution's databases. Metadata creators at the University of Nevada, Reno argue that using one shared vocabulary across all digital collections allows for better control of name authorities and enables linking not only within collections but for future linked open data endeavors.[6] However, as was UNR's concern, not all institutions share their local controlled vocabulary with national authority databases, effectively meaning that they are working in a vacuum. The benefits of their efforts are limited to their own local institution.

The University of Utah's J. Willard Marriott Library is responsible for maintaining the Mountain West Digital Library (MWDL). With that responsibility comes the challenge of standardizing metadata created by over seventy-five partners while adhering to standards set by the Digital Public Library of America (DPLA). Jeremy Myntti of the University of Utah partnered with Nate Cothran from Backstage Library Works to automate a process to update and standardize metadata fields in Extensible Mark-up Language (XML) fields in an attempt to replicate a MARC21 automated authority control process. The project was motivated by not the desire to implement standards across collections, but the desire to implement linked data–friendly metadata. "The premise of linked data is that information need only be updated once since the relevant information in linked data references resides in a single location"[7] Myntti asserts the importance of using LCNAF records when possible because they are stable but acknowledges that digital collections tend to use local names that are seldom present in the LCNAF.[8]

Linked data initiatives provide another motivation for digital collections managers to create authority records that are interoperable across institutions. UNLV's librarians are experimenting with linked data and recently developed an interface that exposed relationships between subjects and objects (called triples) which are created from authority records. Southwick of UNLV maintains that linked open data will only work if records are created using interoperable uniform resource identifiers (URIs) and that this is best done by incorporating existing LCNAF records, though the workflow does not include creation of new LCNAF records even when they might be necessary.[9] Since linked open data may be the framework that libraries embrace in the future, it makes sense to generate authority records that provide access to stable URIs for linking. "By ensuring name consistency, the cataloger is creating the potential for heading links across discovery tools and setting the stage for the implementation of a federated search function that would enable users to discover traditional library materials as well as digital projects in the same search."[10]

Sometimes when partnered with special and digital collections, institutional repositories are another area where name authority work is direly needed but is not present in many cases. Salo notes that the do-it-yourself nature of depositing content in institutional repositories creates what could be referred to as a near metadata crisis, but the name authority situation is worse. "In practice, librarian-mediated deposit has turned out to be the most viable method of repository population" but the repository software design did not consider the need for authority control.[11] The lack of standards also contributes to poor search results. "The naïve user of an institutional repository will swiftly find that the absence of name authority control inhibits retrieval of items by a single author. Should a user arrive at a specific item and desire to see more items by the same author, clicking on the author's name will lead only to results for that particular name spelling or variant."[12] Once name variants creep into the institutional repository, they are difficult to distinguish and eradicate, meaning that many irrelevant names may show up in a user's search results. Salo advocates for institutional repositories to make use of metadata and authority standards for the benefit of their beleaguered users.

Besides helping to avoid such search and retrieval disasters, a library's participation in the Name Authority Cooperative (NACO) or a NACO funnel can help to disseminate locally held resources to benefit others. In 2009, Folkner and Glackin published a study that considered the number of Idaho-related corporate records generated by a group of Idaho libraries that became NACO certified in 2005. The study questioned whether their NACO certification had a positive effect on the creation of authority records for Idaho corporations. It revealed that from 2005 to 2007 the total number of Idaho corporate name authority records in the LCNAF increased by approximately 12 percent. The pre-existing body of records dated back to 1977, showing a very notable increase in two years versus forty years of legacy authority record creation. Folkner and Glackin concluded

that "Through the participation of Idaho institutions in the NACO program, authority control of Idaho agencies has significantly increased when measured by the number of authority records created for Idaho corporate bodies."[13]

Special collections and archives professionals have begun to recognize the importance of using standardized names in their work. Some advocate creating separate XML name authority records and databases, while others call for the creation of software and automated processes to identify, pull, and standardize names within non-MARC metadata. Veve discusses XML schemes for authority elements in non-MARC metadata, such as Encoded Archival Context, but notes that machine selection and extraction of names from XML metadata is unreliable, and the labor costs associated with building an XML name repository make it impractical. Conversion is also not recommended: "The idea of converting from MARC authority records into records that use the local XML schema sounds appealing, but this method creates double work for the library."[14] With conversion, a library would still need to establish new names in the LCNAF to complete the process, and LCNAF records have the advantage of being shareable in a national database. "If many headings have to be locally established in XML schema following the rigorous LCNAF standards, then libraries may find establishing the headings directly in the LCNAF more worthwhile because other libraries can benefit from this authority work. This approach can save the time necessary to convert names to another schema and to build a database to manage them. For these reasons, relying on conversion of authority records from MARC to XML may not always be the best approach to support name authority control in XML."[15]

According to Xia, in 2006, name authority control in digital repositories was "still a dream for a long time to come."[16] Xia describes the lengthy process required to create and maintain reliable name authorities and suggests that software may be the only way to meet the demand. He also maintains that "customizing software, metadata, and databases so that name identifiers can become most unique at the time data are deposited" is our only hope.[17] Others disagree and maintain that human intervention is required to clarify and normalize name variants, even though it is a time and resource commitment. Salo suggests that "institutions considering name authority control a priority must liberate sufficient staff time to do the work. The initial plunge of correcting a populated repository will take far more time than once- or twice-yearly maintenance work afterwards, except perhaps for swiftly growing repositories."[18] Veve maintains that "no matter how difficult keeping track of name access points in digitized materials is, it is necessary in order to keep digitized objects retrievable. Access points not only help in the retrieval process of documents but help keep materials by the same creators or about the same

subjects together."[19] Dragon agrees, stating "access points can make relationships explicit."[20]

Some archives and digital libraries have begun to experiment with creating cooperative, national name authority repositories using XML, but these programs still use the LCNAF as a starting place. Many of these XML name repositories use LCNAF name authority records as the primary or sole source for harvesting names. EAC-CPF (Encoded Archival Context for Corporate, Personal, and Family names) and SNAC (Social Networks and Archival Context) are two noteworthy initiatives that rely heavily on LCNAF records for their starting point. If these other tools are based on LCNAF, the most practical approach may be to first do the work directly in LCNAF. EAC-CPF and SNAC records can easily be generated from LCNAF name authority records, and the authors hope to use these tools to expand discovery options for their collections and creators. In their discussion of the need for archivists to create shareable descriptive metadata, Riley and Shepherd address the need to actively push metadata beyond local systems, and they extend this argument to name authority work, stating, "Yet not only descriptive metadata about archival holdings can be of use in the shared environment. Structured description about the creators of archival resources could be useful in many ways."[21] They further assert that contextual data created for archival records can be beneficial to "third-party services seeking data from multiple sources to provide high-level discovery and use services."[22]

Background of the Name Authority Record Initiative

In January 2017, the Metadata and Cataloging Department at the University of Nevada, Reno (UNR) Libraries received NACO training from a regional trainer. This training made UNR Libraries the first library in Nevada to embark on the path to NACO certification. Through the NACO certification program, participating libraries contribute authority records for personal, corporate, and jurisdictional names; uniform titles; and series headings to the LCNAF. NACO is one of the Program for Cooperative Cataloging's (PCC) four different programs, including BIBCO (the Monographic Bibliographic Cooperative Program), CONSER (Cooperative Serial Program), and SACO (Subject Authority Cooperative Program). Active NACO membership is typically required for a library to join the other programs, and it is often the first step towards more active participation in the wider bibliographic universe.

Four years of new leadership had brought UNR's Metadata and Cataloging Department to the point of NACO certification, though it was a goal that some staff had envisioned

for more than a decade. The Head of Metadata and Cataloging joined the Libraries in late 2012 from an archives metadata and technical services background and brought a drive to catalog the rare and unique local materials that had been neglected or ignored within the libraries' more remote units. Under this new direction, each year the department assumed large projects to establish new procedures and efficient workflows to provide better discovery and bibliographic access for tens of thousands of materials, including the Special Collections Department's publications, manuscripts and university archives, and photograph collections; published and manuscript materials from the Basque Library; and specialized maps and government documents held by the DeLaMare Science and Engineering Library.

The department's efforts to increase resource description for these local and unique materials produced a lot of additional work for the cataloger managing name authority work. Beyond wanting UNR to actively contribute to bibliographic knowledge, the Head of Metadata and Cataloging noted there was an increasing number of local and regional names they encountered either as existing older name authority records that could be updated or names lacking authority records, which justified the need for the department to receive NACO training. The fact that the department was not only approved to pursue the training but encouraged to do so was a welcome departure from previous library leadership that did not support cataloging initiatives and denied the usefulness of quality metadata and authority work.

Prior to 2017, authority work at the UNR Libraries consisted of diligently checking LCNAF and OCLC Connexion during bibliographic description and uploading the appropriate existing records into the local Sierra ILS. After cataloging, name authorities in the catalog were maintained using a monthly authority file maintenance and overnight authorities services provided by MARCIVE. It was meaningful for the catalogers to engage in this authority work since library administration prior to 2011 had forbidden even these passive approaches to authority work, and the consequences for catalog searches had been quite destructive. More potential names were discovered during the cataloging of local and unique materials. When confronted with the need to establish a local name, whether to disambiguate it from an incorrect existing name or to set a local preferred form of a name and create a consistent local access point, UNR catalogers could only save temporary authority records in the catalog for local use. This meant that their work benefitted only those in the cataloging department and existed outside the typical authority workflows. Without NACO certification they could do very little to affect these situations and due to other conditions in Nevada, there was no one else in the vast state's small library community upon whom they could rely to perform the task.

Compared to other Nevada libraries, UNR Libraries was well-situated to become a leader in name authority creation in the state. Despite its large physical size and continuing growth trends, Nevada remains a sparsely populated state, with its 2.9 million residents concentrated mainly in the urban cities at either end of the state, Reno in the north and the more populous Las Vegas in the south. These metropolitan centers are also home to the two major university campuses in the state, the University of Nevada, Reno and the University of Nevada, Las Vegas, with other smaller colleges often clustered in the same metropolitan areas or located in small towns and rural areas isolated by hundreds of miles and several hours' drive. Due to the very small staff of the latter and past agreements, the university libraries have often provided cataloging for some of the smaller community colleges, as was the case for UNR. The campuses of UNR in Reno and UNLV in Las Vegas are themselves extremely distant when compared to many other states, as one would have to drive almost eight hours and over 450 miles to get from one to the other. For Nevada's libraries, the distance and the difference between urban and rural environments has historically been a challenge to collaboration in addition to struggling with limited funding and staff resources. With its consistent leadership and productive, accomplished staff in the cataloging department, UNR decided to pursue NACO training and certification with the intent of eventually establishing a NACO funnel project to serve the entire state.

The Head of Metadata and Cataloging was personally involved with the process of bibliographic description for unique and local materials and understood the need to develop a workflow that served more than just the cataloging department. With a fairly small cataloging team for a university library and collections of its size, the head was responsible for most of the libraries' original cataloging. Resources requiring original MARC records included published materials from many areas of the library, though one of the largest concentrations was from Special Collections. Special Collections' manuscripts and archives collections needed original MARC cataloging records that often contained links to the digital surrogates and item-level metadata the Digital Initiatives unit produced to highlight those holdings. The Head of Metadata and Cataloging drew on her background in archives and special collections metadata by focusing on bibliographic description of these unique local materials, and the link between the triad of departments grew stronger.

After four years of original cataloging and leading the department, the Head of Metadata and Cataloging gained sufficient familiarity with the kinds of name authority gaps that cataloging staff frequently encountered for persons (particularly well-known state politicians and artists), corporations and organizations (especially University entities),

families, and the many jurisdictional place names within Nevada that were largely unknown elsewhere (including mining districts and ghost towns). The Metadata and Cataloging Department had been supplementing both the Special Collections and Digital Initiatives departments with descriptive metadata support, which in turn meant that open and effective channels of communication and collaboration were established between the three departments. Furthermore, while name authority work has traditionally been handled by catalogers and cataloging departments, UNR catalogers were convinced it could also be provided elsewhere. Multiple faculty members had significant metadata creation experience in one or more archives, cataloging, and digital collections departments, and catalogers knew that names, whether personal, corporate, family, or place, were just as vital to set and distinguish in non-MARC metadata for unpublished materials as they were in MARC bibliographic records for published materials. Finally, after much experience performing original cataloging work on their holdings, the Head of Cataloging and Metadata concluded that as the most frequent sources of names needing new authority records or updates to existing records the two departments should be included with the cataloging team in the training and the resulting workflows.

With this goal in mind, half a dozen members of both the Special Collections and Digital Initiatives departments were invited to attend the weeklong training, accounting for about a third of the attendees. Because of our collaborative nature and awareness that Special Collections and Digital Initiatives were encountering a lot of new names, the Metadata and Cataloging Department invited Digital Initiatives and Special Collections non-cataloger metadata creators to attend at least a portion of the training so that they could understand the process of creating a name authority record (NAR). The plan was to have Metadata and Cataloging librarians and staff who regularly work with MARC records and the RDA standard create and submit name authority records to the LCNAF, and the Digital Initiatives and Special Collections librarians and staff were included to enable them to understand basic principles and to suggest names and share the workload in record creation.

Non-catalogers from both departments later described the training as highly informative, although they reached a

Figure 1. LC Name Authority Record Created for Chris Ault

point at which the learning material became too complex for them to follow. They noted that the experience allowed them to understand the need to provide context for NAR creation. The non-catalogers also recognized the need to exercise restraint when determining which names are appropriate to include in the LCNAF. By witnessing the level of detail required to create a new NAR, non-catalogers in Digital Initiatives and Special Collections adjusted the judgments they made to decide which names need authority records.

For the training exercises, non-catalogers from both departments contributed names they had encountered in their descriptive workflows and outside of published materials. One name provided by Digital Initiatives, Chris Ault, illustrates a perfect example of a notable individual who previously did not have an LCNAF record. Ault coached Nevada football for several decades and led the team to several important victories. He was awarded numerous regional honors, inducted into the College Football Hall of Fame, and has a rich Wikipedia entry. Although professional players who Ault coached, such as Colin Kaepernick, already had LCNAF records, Ault lacked an entry, so the team created a record for him during the NACO training (see figure 1).

Establishing a Workflow

An important consideration was how to continue and foster collaboration on name authority work beyond the training. With unique Nevada names being discovered in

all three areas, UNR catalogers knew they needed a workflow that would help them to manage name authority work efficiently but also keep track of the names generated from descriptive work done in other systems outside the cataloging department. It was essential to make sure authority work would extend to those departments while also avoiding working on separate "islands" and duplicating efforts across teams.

It seemed necessary that all involved parties, regardless of department, would continue to draft name authority records from their own sources, which would then be checked by the lead authority work cataloger. While Metadata and Cataloging would continue to use OCLC Connexion and Sierra to create and import bibliographic and name authority records, most Special Collections Department metadata work was done in Archivist's Toolkit, which lacked the catalogers' tools authority control capabilities and shareable authority creation mechanisms. CONTENTdm, used so ubiquitously to create and store metadata for Digital Initiatives projects, also lacked authority control mechanisms. Still, UNR catalogers assumed the workflow would have both the catalogers and their non-cataloger partners working on bibliographic description in their native tools and databases, and when a new name was triggered by descriptive work, both cataloger and non-cataloger would create a name authority record in OCLC Connexion, save it to a designated online save file, and the cataloging department's appointed NAR coordinator would review and submit a group of records on a regular basis.

First Attempt: Constant Data Template

UNR needed a tool to facilitate communication and continuing name authority practice between catalogers and non-catalogers. The most practical workflow seemed to include embedding the tool directly in the name authority work process. Thus, using the constant data tool in OCLC Connexion, UNR catalogers created name authority record templates based on the standards and guidelines taught in the training and the local best practices they had adapted. These constant data templates were intended to function as fill-in-the-blank forms with prompts and hints on standard content plus formatting and punctuation, mainly for those non-catalogers who did not typically provide MARC/RDA cataloging. The constant data templates were designed to resemble a standard MARC/RDA-compliant name authority record, while providing flexibility to accommodate the variety of information available or appropriate for any given name. For the pilot use of these templates, constant data was created only for personal and corporate names. They included the characteristic fixed fields, required and recommended MARC field tags, indicators, field contents and formatting, and punctuation. A one-page best practices guide was created to guide template users in name authority creation, including the guidelines for choosing preferred form of the name, appropriate use of qualifiers, and inclusion of other detailed information. These constant data templates were used from February through May 2017, or approximately the duration of the semester immediately following UNR's NACO training (see figure 2).

However, even with these guiding tools and intentions to make it easier to complete the task, lack of familiarity and practice in MARC format, RDA cataloging, and in the use of OCLC Connexion proved to be too wide a gap for the non-catalogers. Though they consistently reported high levels of interest in creating name authorities and belief in the value and importance of contributing names to the LCNAF, collectively the non-catalogers (four core partners with up to seven possible contributors) submitted fewer than five draft name authority records during the four months that the constant data templates and best practices were available.

Rec stat	n	Entered	20170324				
Type	z	Upd status	a	Enc lvl	n	Source	c
Roman	∎	Ref status	a	Mod rec		Name use	a
Govt agn	∎	Auth status	a	Subj	a	Subj use	a
Series	n	Auth/ref	a	Geo subd	n	Ser use	b
Ser num	n	Name	a	Subdiv tp	n	Rules	z

046		‡f YYYY-MM-DD ‡g YYYY-MM-DD ‡2 edtf
100		Last, First, MI., ‡d YYYY-YYYY
370		place of birth ‡b place of death ‡e place of residence/headquarters (repeatable) ‡f other associated place ‡2 naf if applicable
372		Field of activity ‡2 lcsh [this should be a field or a topic they did something in]
373		Associated organization ‡2 naf [need one from NAF if you're going to link it in a 510]
374		Occupation ‡2 lcsh [this should be a class of people by profession or group; they don't have to be a professional at it]
375		Gender ‡2 lcdgt
377		eng
378		‡q Fuller Form of Name [spell out initials if you have them]
400	1	Variant form of name found in your sources [‡d mirror any dates you put in the 100]
510	2	‡w r -OR- for Politicians: ‡a Related organization, must be in NAF [For employees of UNR: ‡i Employer: ‡a University of Nevada, Reno ‡i Corporate body: ‡a Nevada. ‡b Legislature. ‡b Assembly ‡w r - no period between Assembly and ‡w]
670		‡a Title proper of the source, year of publication: $b location in source (data you're recording) [for sources with a specific page number or place]
670		‡a Title proper of the source, year of publication/date viewed, etc ‡b (data you're recording) [omit the colon for online sources or those with no specific page number]
678	0	Narrative, grammattically correct biography of the person you are establishing, starting with their full name and dates and summarizing relevant information about them, all of which must be justified somewhere in a 670.
690		Record your name or initials and that it's a new record.

Figure 2. Name Authority Control Date Template Created by UNR Catalogers

Descriptive bibliographic work continued for all librarians and staff in all but one case (explained below), yet several names that could have been submitted were held back because the tasks had proved too difficult to integrate into workflows existing outside of Connexion and the ILS. The major roadblocks to adoption were a lack of fluency in MARC format and RDA and a perceived inefficiency in the workflow and process. Much like learning a new language, if one does not consistently use MARC format and RDA it is ineffective to attempt to dabble in this work, even with the help of a constant data template as a guide. The MARC record format and the RDA descriptive standards used in bibliographic cataloging and name authority record creation are so intricately formatted and their tags, the indicators, and subfields coded to such specificity that even a stray space or period can create indexing errors. If an individual only performs this task one to five times per month, retention is minimal, and drafting the record will require much more time, particularly to accommodate looking up field tags, indicators, subfields, and their contents.

The constant data templates and best practices were intended to avoid this time sink and detailed double-checking, but those intentions were subverted by the complexity of MARC format and RDA. Additionally, three of the five records created by non-catalogers contained errors that demonstrated a misunderstanding of essential concepts, such as how to choose the preferred form of name, the purpose of the 780 biographical note field, and how to use the source note fields to document what was input in various structured fields in the upper variable fields. This might be attributed to novice practice, but it suggested that a general lack of familiarity with broader MARC format and RDA cataloging principles might be more of a problem than initially hoped.

Switching programs and thought-processes mid-description proved to be disruptive for the non-catalogers. Breaking their bibliographic work cycle to use an unfamiliar program (e.g. OCLC Connexion), in a "foreign" metadata language (e.g. MARC), using "foreign" descriptive standards (e.g. RDA) created barriers to adoption. In contrast, if one provides bibliographic description in a cataloging environment that supports MARC format and RDA, such as OCLC Connexion, it is easy and efficient to navigate within the same tool and metadata schema into authority work and name authority file creation. One could even switch between the bibliographic record and the authority record in the program to complete the latter. Asking the non-catalogers to switch between metadata schemas, descriptive standards, and tools was too challenging.

Finally, and what may be the most unique facet of the situation, the Head of Metadata and Cataloging, possessing years of experience managing projects in archives and special collections, left the cataloging department to serve as the Director of Special Collections. A consequence of this role change was that the Cataloging and Metadata Department lost one of the two staff who provided the final review and submission of name authority records plus someone with MARC format and RDA original cataloging expertise. Losing a direct contributor of authority creation was a significant challenge. In the interim months, the catalogers continued to create name authority records as they encountered them in their own workflows in regular published materials, but most name authority work from Special Collections and Digital Initiatives was put on hold.

Take Two: Conquering the Jargon

To overcome the many roadblocks inherent in the first workflow that included non-catalogers attempting deep MARC-RDA work using unfamiliar tools and creating name authority records without enough practice to allow for mastery, UNR's catalogers and the new Head of Special Collections decided to pilot a translation tool. It would be quite possible to translate the required and recommended MARC fields into plain language, but it needed to be done thoughtfully to make it a genuine time saver.

To be non-cataloger friendly, the tool needed to remove the MARC field tags, indicators, and other jargon, and replace them with natural language questions and helpful hints for how to answer those questions. It would also need to be possible for a non-cataloger to have the "trigger" collection or item in hand or, if digital, open on the desktop, and from there open a form and provide the necessary information without having to worry about MARC formatting or RDA rules, and then return to the descriptive work. This would allow the non-catalogers to document their knowledge and almost all the information needed for the eventual record while they are working with a collection or item, as opposed to doing so much later when such knowledge and information might be forgotten. For example, if an archivist in Special Collections processes a collection and discovers a name that is not in the LCNAF but the collection provides enough information to create a name record, the archivist can complete the NAR form while processing the collection. At that point, information will be fresh in the archivist's mind and relevant details can be provided; after a week or longer, the information learned from processing that would be useful in NARs can be forgotten and time lost looking up the information again. An important aspect of the workflow is the desire to capture information while it is still fresh and to eliminate the need to take extra steps later that will waste time and resources.

Equally important, the tool should also aggregate the suggested name records into a single queue regardless of type (personal, corporate, place, etc.) and/or the department or individual originating the request. With a

single queue, the cataloging department's name authority coordinator could regularly check for proposed names as part of their name authority creation workflow. It was necessary for the tool to be able to capture all or most of the data needed for the NAR in that same place so that everyone using it was going to the same list and form. Since three departments are simultaneously creating records, the form also provides a way to eliminate duplication of effort. If Special Collections archivists, Digital Initiatives personnel, and catalogers continue to create name authority records within the confines of their own units, it is possible for duplicate records to emerge that will later need to be reconciled; having all proposed name authority records on the same list greatly reduces the likelihood of unintended duplication.

UNR catalogers considered using an Excel spreadsheet, but the column headings did not allow for adequate explanatory information to tell users what to include or when to cite sources. A spreadsheet also seemed to limit some responses to only one answer per field, whereas multiple answers were sometimes more appropriate, such as when listing the different forms of a name found in a given collection. In addition, some members of the special collections team are not comfortable using spreadsheets so even if there were a spreadsheet view, to get the widest buy-in, another view would be necessary for some potential users to adopt its regular use.

At the same time, the library's units and subunits had begun to use Airtable, a flexible, extensible, easy-to-use spreadsheet and database tool that offers both free and fee-based options. Because both the cataloging and special collections departments had begun to use this tool to track and manage other projects, it was an easy choice to use it to manage name authority record submissions. It is worth noting, however, that other libraries may prefer to choose tools based on budget or policy constraints, but this should not have a negative consequence for the project's outcome.

Airtable allows three distinct and necessary views: the individual questionnaire form that the non-cataloger completes to submit a name to the cataloger who coordinates name authority records (see figure 3), the spreadsheet or overall "queue" view that the authority cataloger checks, and a completed version of the questionnaire form the cataloger opens to view the data supplied by the non-cataloger for creating each name authority record (see figure 4). Separate forms were created for personal and corporate names for the pilot, with other forms for other types of names such

Personal Name Authority Record Form	
1.	Creator Name (casual)
2.	Your Name
3.	Date sent to MCD mm/dd/yyyy
4.	What is the Title and Call # of the collection that triggered this NAR? (for Special Collections)
5.	What is the Title and Digital ID of the collection/item that triggered this NAR? (for Digital Collections)
6.	Check the name in LCNAF. What form of the name did you find? (N/A if no name is found.)
7.	Check the name in OCLC if you have access. What did you find? (N/A if no name is found.)
8.	Check the name in Sierra ILS. What did you find? (N/A if no name is found.)
9.	Check familysearch.org. What did you find (name, date of birth, family, etc.)? (include link to record.)
10.	How does the name appear in the collection? (List all the different ways you have found it while processing.)
11.	What is the most common form of the name you found in the collection?
12.	Are there any nicknames or other names they are commonly known by that are not found in the collection? Where did you find that or how do you know? (Cite any sources not in collection.)
13.	Birth and death dates? (Include months and days if known; if unknown skip. Cite all sources.)
14.	Place of birth? Place of death? (Cite any sources not in collection.)
15.	Where did they reside for most of their lives or careers? (Cite any sources not in collection.)
16.	Any other places where they did something significant? (Cite any sources not in collection.)
17.	Any important associated organizations, such as companies they worked for or founded? (Cite any sources not in collection.)
18.	Using plain language, what was their occupation? (Cite any sources not in collection.)
19.	What fields were they active in? This can include non-paid labor too. (Cite any sources not in collection.)
20.	Was this person a politician? NV state or Federal? What offices did they hold and when? (Cite any sources not in collection.)
21.	Gender?
22.	Biography (using data listed above, write a brief 1 or 2 sentence biographical sketch. Only include information substantiated above with a source.)
23.	Link to digital file
24.	Anything else you want catalogers to know?
25.	Attachments

Figure 3. Airtable Questionnaire Form Non-Catalogers Use to Submit Name Information

as place planned for a later phase. Once completed and submitted, each new form then auto-populates the queue and the name authority coordinator in cataloging is automatically notified when something is added to the queue. All views are accessible to all departments, but the catalogers generally focus on the completed forms, while the non-cataloger contributors mainly use the questionnaire form.

Both the personal and the corporate name forms (and later the place names) feed into the same queue or spreadsheet, which serves as a hub for the variety of forms. Since the MARC fields for personal, corporate, and other types of name authority records overlap to some extent, massaging was necessary to record all the data in a single spreadsheet. Similar or overlapping MARC fields from the different types of records feed into one spreadsheet column with a general label that covers both ideas, or in some cases, MARC fields that are distinct for one type of record have their own column that simply remains blank for other types

Figure 4. Portion of a Complete Airtable Questionnaire Form with Queue View in Background

that corporate names can be more difficult to look up in the LCNAF since names change as companies merge or fold. Yet the time invested in verifying authorized corporate name entries provides substantial benefits, making it easier to maintain a clean controlled vocabulary list of these entities. Digital Initiatives also plans to integrate LCNAF place names into their metadata workflows at a later date (see figure 5).

It is expected that most of the individuals identified in Nevada photograph collections most frequently encountered by Digital Initiatives will not have a name authority record in the LCNAF, but metadata creators still perform due diligence by searching for every notable person. After the training, it was apparent that there was a need to determine criteria for when a record should be created. This echoes the experiences of the Eastern North Carolina Postcard project librarians, who noted that authority work consumes large amounts of personnel time and they applied a selection process to "pare down the number of specific headings created."[23] At UNR, user retrieval was the main consideration when deciding which names should be added to the authority file, so to facilitate decision-making, librarians at both institutions created a checklist of criteria to pinpoint which names warranted inclusion.[24]

Notable individuals are usually defined as local politicians, business owners, philanthropists, scholars, etc. Since Digital Initiatives' metadata work already includes locating names in the LCNAF, it was a logical next step to integrate the NAR form into the workflow. When Digital Initiatives metadata creators encounter potential notable persons, the LCNAF is checked to determine whether that individual has a record. If a record exists, the preferred version of the name is inserted in the appropriate metadata field. If not, the metadata creator completes the NAR form with information provided by the item in hand and whatever else has been collected during the research process. Most of the records in Digital Initiatives are created for photographs, which are usually accompanied by brief information with very little context. To provide accurate records, metadata creators perform research to discover more about the people in the photographs, which takes considerable time (see figure 5).

of records.

Whether it is a personal or corporate name, the form's purpose is to collect as much information as possible to create a name authority record, both at the time the knowledge is fresh in the non-cataloger's mind, and doing so using plain language that does not require deep knowledge of MARC or RDA or expertise with cataloging tools. As shown in figure 3, the personal name form poses a series of simple questions to the non-cataloger, the answers of which correspond to all required and most recommended MARC fields and codes found in an RDA compliant name authority record.

Lessons and Outcomes: More Organic Workflows

The Digital Initiatives NAR Workflow

Prior to NACO training, staff and student workers in Digital Initiatives were using a metadata workflow that consistently incorporated checking personal names in the LCNAF. Additionally, since the NACO training, staff, and students have been trained to look up corporate names, such as publishers or record labels, when processing published materials. Digital Initiatives metadata creators found

In testing the new workflow, metadata creators in Digital Initiatives could successfully provide information by completing the NAR form. Although researching notable individuals was part of Digital Initiatives' existing procedures, the process of suggesting a name to add to the LCNAF was more complicated than expected. The NAR form requires a lot of information pertaining to the individual to whom the suggested name belongs, both in terms of their relation to an existing digital collection plus personal information pertaining to that individual. Finding and including this information involves cross-referencing it with the collections to which the name is related, doing cursory research regarding the individual, and including links to the collections and sites from where the information was collected. Digital

Figure 5. NAR Workflow Developed for Digital Initiatives

Initiatives metadata creators found that the benefit of this somewhat extensive process is that it prompts them to go beyond the LCNAF to check the local ILS to ascertain whether there is a temporary local name authority record, and to consult other biographical databases to obtain additional information pertaining to their identification, such as family relations and places of birth and death. The NAR form added time to the metadata creation process both in the research required and the additional step of completing the form. Nonetheless, Digital Initiatives metadata creators understand the benefit of adding names of notable Nevada individuals to the LCNAF for future projects and/or collaborations, particularly those in which name authority metadata becomes outward-facing as linked open data.

The Special Collections NAR Workflow

Like Digital Initiatives staff, the archivists, manuscripts librarians, and processing staff in Special Collections were already familiar with the LCNAF. Some were consistently checking the LCNAF during metadata work, though not everyone possessed a clear understanding of how to ascertain and use preferred versions of names prior to NACO training. Some archivists tended to try to change preferred versions of names for local use and to include extraneous information, such as titles, roles, middle names, or birth and death dates, in the name access points included in finding aids, in addition to and outside of the preferred form of a name, which was well-intended but did not follow standard construction of name access points. Additionally, in a few cases, Special Collections staff proposed names when a name authority record already existed in the LCNAF. It was informative for some Special Collections staff to attend the NACO training and gain a deeper understanding of the principles behind the local and national use of the LCNAF.
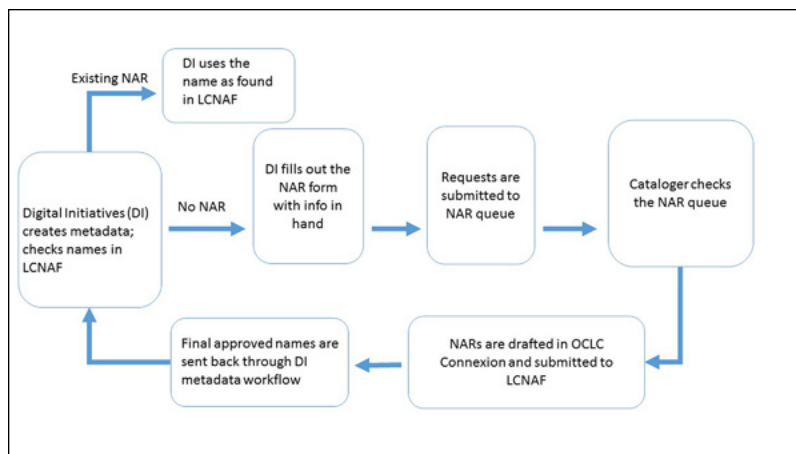
Integrating consistent and reliable checking of LCNAF into the Special Collections' descriptive metadata workflows was a gradual process that began a year prior to UNR's NACO training. This was likely a result of increased advocacy from the Head of Metadata and Cataloging regarding the particular benefits that NACO certification for UNR would offer for the Special Collections Department and from asking for their support when proposing the training. The further step of performing deep biographical research came naturally to Special Collections metadata creators but completing the name authority record form was initially awkward and not intuitive. Early tests of the form resulted in questions being changed to clarify the information being requested, plus changes and clarification to the labels for the answers that catalogers viewed from the completed forms.

The workflow for coordinating bibliographic and authority work between the Special Collections and Metadata and Cataloging Departments is also more complex, indirect, and convoluted than is desirable. Special Collections staff create metadata in Archivist's Toolkit that is exported in two forms as draft EAD finding aids and MARC records. During the metadata creation process, name headings are checked against the LCNAF; if a new authority record is needed, descriptive work is temporarily paused for brief biographical research (consulting mainly the contents of the collection itself or the genealogical aggregator database familysearch.org). In most cases, this can take anywhere from a few minutes to an hour, with typically one to four potential name authority records resulting from any single collection. Catalogers then review the exported draft MARC records and the authority coordinator checks the NAR queue in Airtable for new name suggestions, provides any associated authority work, and submits a record to LC via OCLC. Finally, after a new NAR
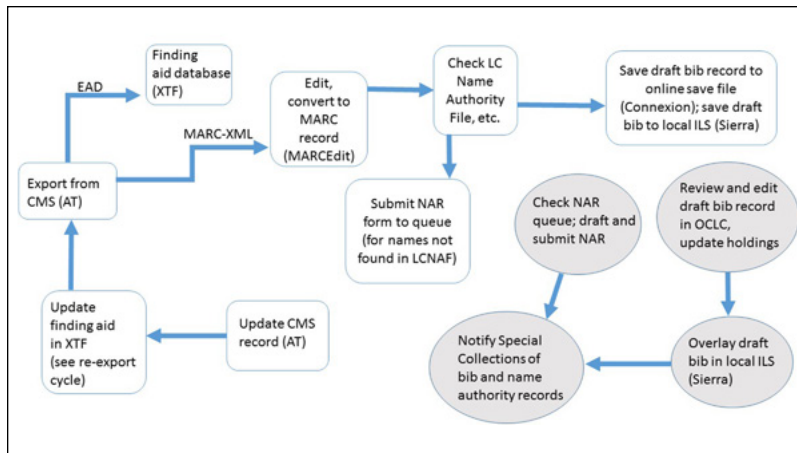
Figure 6. NAR Workflow Developed for Special Collections (Special Collections Steps in Boxes, Cataloger Steps in Circles)

is accepted by LC, catalogers update the MARC record and notify Special Collections staff so the latter may update their records in Archivist's Toolkit and re-export a final finding aid (see figure 6). While this is not a straightforward workflow, the authors note that it works well for both Special Collections and cataloging staff. Archivists have commented that although the process was initially slow and cumbersome, they now consider the form user-friendly and enjoy conducting research. Archivists report that the latter particularly gives them greater knowledge of their creators, subjects, and collections.

Discussion and Analysis

The workflows implemented at UNR make name authority work inclusive for the related departments that can benefit most from this process and reduce the tendency of metadata creators outside cataloging departments to create access points in a vacuum. Too often, metadata is created in silos, resulting in unknowingly duplicated efforts. Having a tool to collect and track proposed names and their numerous associated data points, which are then funneled to a centralized, designated cataloger to create name authority records, has reduced that risk.

Metadata creators now are better able to contextualize their own collections and participate in a broader library universe by utilizing available resources to their fullest extent. This includes checking for the existence of established LC authority records before making the effort to create something new. Anybody, including student workers, can use the LCNAF to check for existing names and their preferred forms while holding the relevant resources in their hands. The procedure also encourages Special Collections and Digital Initiatives non-catalogers to spend more

time researching individuals than they otherwise would, which has the benefit of increasing their contextual knowledge of local subjects and persons. As professionals, this makes them stronger resources during reference inquiries. While working directly in MARC format and applying the RDA standard and using some cataloging-specific tools was an obstacle, with the language barriers removed they have found it is easy to perform basic authority work and to collect the biographical data necessary to provide catalogers the information needed to create name authority records.

It is likely that the unique materials held by UNR's Special Collections and made accessible through Digital Initiatives would not have had any authority work provided for them by another institution. Libraries and archives should consider this consequence; if they do not find a way to establish name authorities for local individuals of importance to the history and culture of their region, it is possible that no one will. Through creative, open-minded collaboration and communication with catalogers, solutions can be found that serve the best interests of researchers and the information universe.

Conclusion

Metadata creators in archives, special collections, and digital collections recognize the importance of using established name authority records. Recent interest in creating regional name authority databases to facilitate collaborative or consortial relationships and experimentation with linked open data has increased the importance of sharing authority files to maintain consistency and authenticity. Although local names are not always available in national files, more institutions are finding ways to create name authority records based on locally held resources that adhere to national standards that could be shared with a broader number of organizations.

The process of creating name authority records for the LCNAF is complex and time consuming; however, sharing the workload between departments provides the consistency and context needed to identify and differentiate names of notable individuals. Although there are a variety of catalogers and non-catalogers creating metadata in various library departments, the UNR Cataloging and Metadata Department created a workflow that captures and funnels vital information to NACO-certified catalogers who can then use that information to create name authority records. Through their interaction with the name authority process, metadata creators in our Digital Initiatives and Special Collections

Departments have a deeper understanding of the value and use of the metadata they create. As we look forward to a linked data universe in digital collections, and name authority initiatives such as EAC-CPF and SNAC continue to gain popularity among archivists, contributing LCNAF records is a solid foundation upon which to build the future.

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