Metrics and Matrices: Surveying the Past to Create a Better Future

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ABSTRACT

In 2009, Arizona archivists determined that they wanted to tackle a statewide survey of collections to address collaborative collection development and documentation of underrepresented communities and subjects. This case study examines the Arizona Archives Matrix Project, a multi-institutional survey initiative that puts collaboration and collection development under a critical lens. The process entailed winnowing the state down to under 50 subject categories, developing a survey tool, and querying archivists about their collections. This article looks at some of the successes of an undertaking such as the Matrix, as well as the ethical and logistical issues of a metrics-based approach to understanding collections.

KEY WORDS

Collection Development, Collaboration, Surveys, Advocacy, Archival Theory and Principles, Ethics, Reference

The 1960s and 1970s saw a drastic shift in how archivists approached collection policies. During this period, many activist archivists who had become troubled by the hegemonic nature of archives, started to create more inclusive archives. Inspired by Howard Zinn, they began to "take the trouble to compile a whole new world of documentary material, about the lives, desires, needs, of ordinary people."[1] Community outreach, inclusion of more nontraditional materials, and oral history projects were designed to reflect the presence of more than the economic and political elite. Despite early efforts to collect under-documented communities and topics, such inclusive collecting practices have remained relatively piecemeal and rare. In 2009, a collaborative community of Arizona archivists agreed that they were eager to transform collecting practices in an effort to better record the cultural, environmental, and economic diversity of the state, and to provide a body of archival materials that served everyone. Linda Whitaker and Melanie Sturgeon wrote, "With the Arizona Centennial Celebration approaching, we wanted to examine under-documented communities and topics. This could not be done in a cohesive manner if repository holdings were largely unknown."[2] Thus, the Arizona Archives Matrix was born. The project brought together an enthusiastic group of archivists—many of whom were relatively new to the field—to develop a survey and collect data that could be assembled into an understanding of the state's archival strengths and weaknesses. In theory, the project would place Arizona archivists in a good position to begin identifying the silences in the records and attempting to fill gaps.

When the Arizona Archives Matrix working group formed in 2009, a precedent of collaboration had already been set in the state through a series of roundtables and records surveys. What began as an exercise in strengthening documentation of underrepresented communities/topics collaboratively quickly became something much larger. Armed with subjects to accommodate an entire state's many cultural, scientific, and historic dimensions, additional data were simultaneously collected related to the geographic scope, date range, status of unprocessed materials, anticipated accruals, and any unique access restrictions for each collection. With this additional information, abundant statistics were compiled that reached beyond the initial goals of the project. What transpired has become the basis of responsible statewide collection development and management. Donor relations, access, processing, and appraisal have been undertaken more efficiently with this tool. Further, the design of the Matrix helped to create a jumping-off point that enables the state's archivists to learn each other's collection policies and thus eliminate or reduce competition for collections.

While the Matrix has taught Arizona archivists a great deal about their collecting practices and has promoted even greater levels of collaboration, it has also served as a reminder that compartmentalizing the state's rich collections into a classificatory matrix can obscure the nuances of the collections

and alienate communities and subjects that do not fit neatly into prescribed categories. The final analysis created further questions: in what form would undocumented communities come to be documented? Who would ultimately be responsible for this task? How involved would communities be in the creation of this documentation? This case study discusses the successes and challenges that continue to inform Arizona's current documentation strategies.

History

Arizona has long been a contested landscape occupied by both natives and newcomers. Some see it as pristine wilderness worthy of preservation, while others view it as a land of opportunity ripe for development. Such ambitions for Arizona have played out in the historic records of the state, which highlight both its magnificent natural features and its economic potential in areas of ranching, mining, and development. Whitaker and Sturgeon wrote, "Arizona actively cultivates an image that has come to symbolize the West—a land filled with riches that reward rugged individualism, self-reliance, and the entrepreneurial spirit. It is a place that promises fresh starts and new beginnings."[3] Arizona's collective identity, history, and archives were built on a somewhat Turnerian ethic,[4] which emphasized Arizona as a rugged frontier. The promise of untapped natural resources, wide expanses of land, and people who were keen on pulling themselves up by the bootstraps became embedded in the archival record of the state. Often, communities that espoused more traditional and less capitalist ways of life (such as the many tribes already occupying the land that would become Arizona) were naturalized into the landscape more as features and less as stakeholders. In essence, Arizona has an abundance of records focusing on politically and economically powerful people and organizations, and far fewer records related to marginalized communities.

In 1983, the Arizona State Archives, with funding from the Arizona Historical Records Advisory Board (AHRAB), retained project archival consultant John Irwin to survey the state of Arizona and its numerous archival repositories. In addition to formal assessments of current conditions—including storage, finances, staffing, professional development, public access, and conservation at each institution—he spent a considerable amount of time on acquisitions. "Which historical, topical, or subject areas are over-documented or under-documented in Arizona?"[5] he asked institutions in his survey. Irwin based his assessment primarily on qualitative data analysis and whittled the subjects down to 26 that he felt embodied the state. This lack of granularity helped to create more manageable data but lacked the specificity needed to speak to more isolated histories and topics. Despite his exhaustive efforts, many of Irwin's recommendations required significant funding and an increase in staffing levels. It would

take decades before some were realized.[6] For much of the existence of each institution in Arizona, collection development was a solitary practice. Irwin noted that only 32% of institutions had some form of written acquisition policy.

In 2005, the Arizona Archivist Roundtable began meeting regularly. This consortium, representing several repositories across the state, began tackling issues of common interest. Of particular concern was the sharing of collection development tools that could facilitate more effective and responsible collecting at a wider state level. To support this activity, in 2006 the Arizona Historical Records Advisory Board funded a graduate student, Sarah Boles, to research and determine the extent of archival materials related to broad social, political, economic, and cultural categories; these were then modified to reflect the deeper themes that define the state of Arizona. She utilized newer technologies and online inventories to research 24 restrictive themes, but was only able to find cursory information from the handful of institutions that had contributed their finding aids and inventories online.[7] Moreover, some smaller repositories could only provide brief contact information and a rough listing of subjects represented in their holdings. Also missing from Boles's survey was the vast amount of materials in backlogs not represented in online finding aids or resources. Limitations of her research aside, Boles successfully updated Irwin's 1983 document and noted familiar trends with underrepresentation of some communities in the historic record.

Building on the momentum of collaborative efforts taking shape across the state, the Arizona State Archives received an NHPRC grant to hold the first open meeting of archivists from across the state. The Arizona Archives Summit in January 2009 brought together over 30 professionals from universities, public archives, historical societies, museums, tribal agencies, cultural centers, and private organizations, all dedicated to working more collaboratively with one another.[8] Much of the focus of the 2009 meeting was an overview of collection development and the implementation of More Product, Less Process (MPLP).[9] When broaching the topic of collaborative archival development at the same meeting, many were already aware of gaps in the records. For instance, several recognized that in the long drive to collect the records of the territorial period (1864–1912), decades such as the 1950s, 1960s, and 1970s had perhaps fallen through the cracks. Additionally, this meeting forced archivists to analyze and hone their collecting scopes in an effort to stop competing for collections, while attempting to build holdings of underdocumented communities.

The NHPRC grant helped support similar open gatherings from 2010 to 2013, each meeting focusing on a particular theme.[10] At the 2010 meeting, a working group representing a range of archival institutions (universities, historical societies, nonprofit museums) was formed; its primary goal was to design and implement a survey that would solicit information about individual

collections within each repository. This level of specificity would ensure a much more accurate set of data than that collected and disseminated by Irwin and Boles. Writers of the NHPRC grant that funded the summit meetings articulated the need for a matrix project to reveal processed versus unprocessed materials, define restrictions, and highlight un(der)documented communities and subjects.

Matrix Project Design

After the January 2010 summit meeting, the Matrix working group began designing a survey instrument that a broad range of archival repositories across the state could use. The survey would collect the same basic descriptive information one might find in any finding aid: the name of the collection, date range, geographical scope, physical extent, and subject. However, the Matrix dug deeper. It asked archivists to consider their collection development policies and to analyze whether the collections truly fit into their missions. It required archivists to disclose whether collections were processed or unprocessed (a question that led to long and unresolved conversations on what constitutes "processed," discussed later) and whether they allowed researchers access to unprocessed collections.

Using Irwin's and Boles's reports as the basis for a reworked tool, the working group also considered other similar initiatives across the country. The Library Services and Technology Act (LSTA) grant-funded project "Envisioning Oregon: Planning toward Cooperative Collection Development in Oregon's Historical Repositories"[11] was seen as a recent example of multi-institutional collaboration, albeit one with significantly more financial support than the proposed Archives Matrix project. Of particular use from the Oregon project was the list of subjects relevant to the description of Oregon's documentary heritage.[12] For the Matrix working group, this meant that a significant portion of the work had been started. After a series of meetings, the list of Oregon's subjects was reviewed, edited, defined, and tailored for Arizona. The Matrix working group decided to include 42 subjects on the survey instrument, such as education, politics and government, and Native Americans. The working group also designed a simple solution to collect data, settling on a basic Excel spreadsheet that took advantage of fixed data fields using pull-down menus for some of the data entry. A set of instructions, definitions of subject terms, and a welcome letter accompanied the Excel spreadsheet for any repositories willing to participate.

Round One: Trial and Error, 2010–2011

In spring 2010, the Matrix working group sent out the first solicitations for participation. Correspondence with participating institutions was done via

email and phone. There were no on-site visits to repositories, as members of the Matrix working group voluntarily facilitated this project in addition to their regular duties at their respective institutions. Over the course of several months, 13 of the state's repositories responded. Each responding repository described at least 50% of its collections.[13] Some institutions provided well over 50% and some provided 100%. The working group realized that this would only be a snapshot of current collections, but they were nonetheless hopeful that the results would lead to startling realizations about lapses in the historical record. As the period for submitting data drew to a close, the group noted several troubling trends in submitted datasets. Clearly, ideas of how to define particular terms varied, for example, different interpretations of what constitutes a "collection" (sometimes each accrual was entered as a collection), or what "processed" means. These challenges resulted in data that were difficult to organize and analyze.

One dilemma that emerged during the survey process was the uneasiness of archivists in pigeonholing an entire collection into a single subject. Many wanted the opportunity to include a secondary subject. This was particularly critical to government archivists, who felt that the complexities of their large political collections got lost when they were forced to classify collections simply as "Politics and Government." Most participants chose one topic that encompassed the bulk of the collection at the expense of others that may have highlighted more discrete subjects. For the Matrix working group, it was a delicate balancing act: allowing participants to select multiple subjects would ultimately reveal a more accurate portrait of topics, but would then result in unwieldy data from which to derive useful trends for later analysis. Of the 42 subjects available, some participants simply selected "Other," as they felt no term accurately represented the entirety of the collection in question.

Data collection ended in November 2010, and the working group began analysis soon after. All spreadsheets were integrated into one master file and a few minor keystroke errors were corrected. Some fields were time consuming to analyze, as free-form text was used in several of them; for example, participants entered linear footage, date ranges, and geographic locations in a variety of manners. Generally, the data were weak and predominantly invalid due to the poor design of the survey instrument, the instructions, and the accompanying definitions. Despite this reality, the Matrix working group presented some very cursory results to attendees at the Arizona Archives Summit meeting in January 2011. The extent of unprocessed collections across the state was noteworthy, as were subjects that were less well represented than others.[14] In anticipation of making improvements to the project, the Matrix working group solicited feedback from attendees. Some suggestions were expected: participants wanted the option to select at least two subjects for each collection; they wanted clearer definitions for selected terms, as well as more comprehensive instructions; they

wanted to have fewer free-text fields and more drop-down lists from which to choose items. Of particular note were comments received from Native American archival colleagues who felt that none of the subjects spoke to them or the needs of their respective communities.

The Matrix working group reconvened shortly after the January 2011 meeting and worked on implementing some of the proposed changes. The decision was made to allow participants to select both a primary and a secondary subject for each collection. If "Other" was chosen, a qualifying comment/suggestion was requested in the adjacent comments field. The number of subjects was increased to 45, and a thorough review of the definitions resulted in some substantive changes. A comprehensive set of instructions was drafted that detailed what was being asked of participants in each data field. Definitions of "processed" and "collection" were provided to mitigate confusion.[15] A form was created that required permission from each participating institution to disseminate data in any number of venues, including a website.[16] Finally, acknowledgment of the responsibility to address the needs of the Native American archives community through the creation of a culturally responsive survey tool was articulated, though little action has been taken with that initiative.[17] Native American archival colleagues were invited to participate on a voluntary basis, but only with the survey instrument in its current form.

Over the summer of 2011, the revised Matrix tool was sent to existing and prospective participants. Previous contributors were asked to refresh their data within the new parameters and to provide information about an additional 25% of their collections. New contributors were asked to provide information about at least 50% of their collections. Both new and old contributors complied with the requested percentages, and a fresh set of data was received by November 2011. Although the fixed data fields made tabulating data more efficient, it stretched the working group's data analysis abilities. Left unresolved was the manner by which both primary and secondary subjects could be combined in a way that they could be accurately portrayed in the final data results. As it stands, only the primary subjects were used in data analysis. The secondary subjects remain in the spreadsheets as a visual reminder to anybody accessing them that a secondary subject deemed significant to the understanding of a particular collection exists. This technical issue remains unresolved.

Matrix Redux: Survey Modifications and Clarified Results, 2011–2012

The Matrix working group presented the improved/enhanced dataset to Arizona Archives Summit meeting attendees in January 2012. In total, 17 institutions contributed enhanced or new data to this second round of the Arizona

Archives Matrix.[18] As a multi-institutional initiative, the following results represent the project as a whole.

- Total number of collections: 5,493
- Total extent: 59,464 linear feet
- Largest collection: 1,892 linear feet
- Average collection size: 11 linear feet

One set of data was collected based on total subjects represented by linear footage, while a second set was collected for subjects represented by number of collections. This was critical to reflect the fact that institutions like the Arizona State Archives and the National Archives and Records Administration (NARA) at Riverside have very large collections that dominate subjects, but repositories such as the Arizona Historical Society have several collections in those subjects. For example, the historical society has numerous collections that relate to mining, yet each of those collections may only be 1 inch or less, whereas another institution may have only a handful of collections about mining, but each of those is over 20 linear feet. Similarly, the overall number of collections from the 1960s may be numerous, yet they are individually small in size.

Figures 1 and 2 indicate the presence of notable disparities between the number of collections and the total linear footage contained in the state's
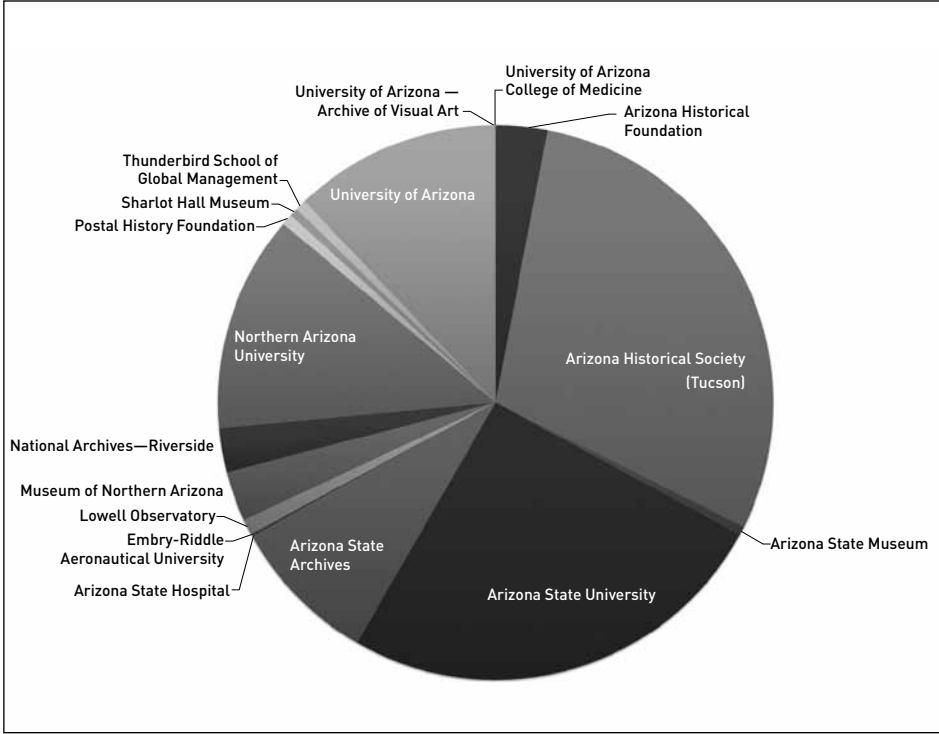

FIGURE 1. This pie chart shows the breakdown of holdings at each institution by number of collections.
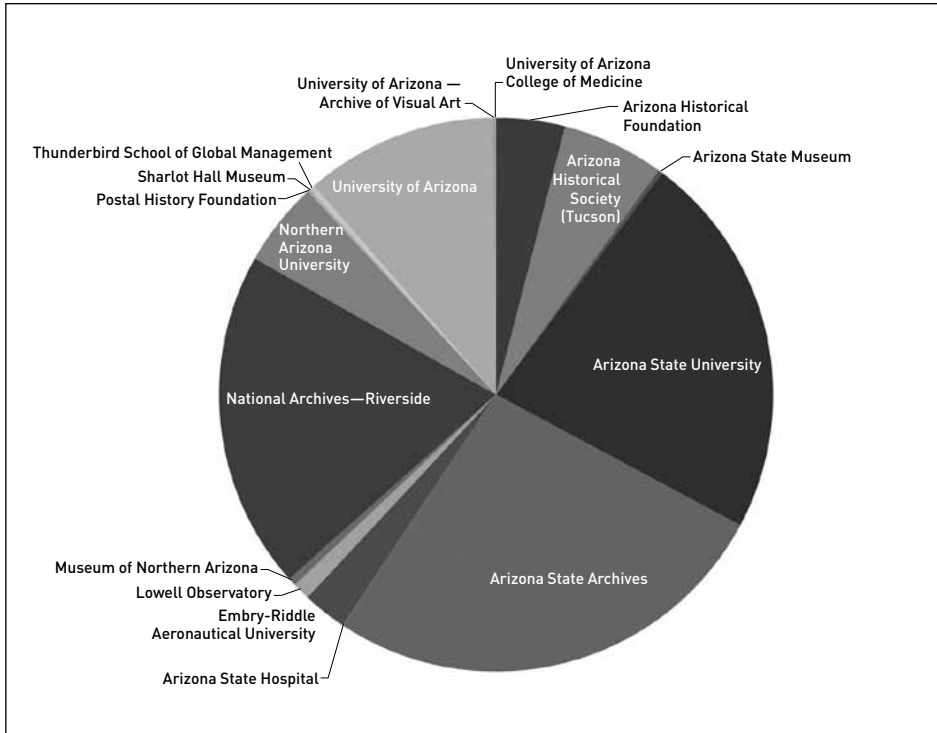
FIGURE 2. This pie chart shows the breakdown of holdings at each institution by linear footage.

largest repositories. This suggests a number of observations. First, the Arizona Historical Society (AHS) maintains a dominant number of collections, while those same collections are relatively small in size. Conversely, the Arizona State Archives has a small number of collections, but each collection is much larger than those found at AHS. Second, the overwhelming indication is that only two or three institutions are carrying the lion's share of the collections in the state, while other repositories—arguably those operating on a smaller scale—have a smaller share.

The geographical coverage option was a fixed drop-down field. Participating institutions could select individual counties in the state or broader "Arizona," "Southwest," "United States," "International," and "Transnational" options to describe the territorial provenance of their collections. As most collections span several counties in Arizona, many respondents selected "Arizona." Maricopa and Pima Counties—the most populous in the state—were next. The fourth-most-selected geographic region was "United States." In general, most participants indicated that materials contained in their repositories pertain to their geographic collecting foci.
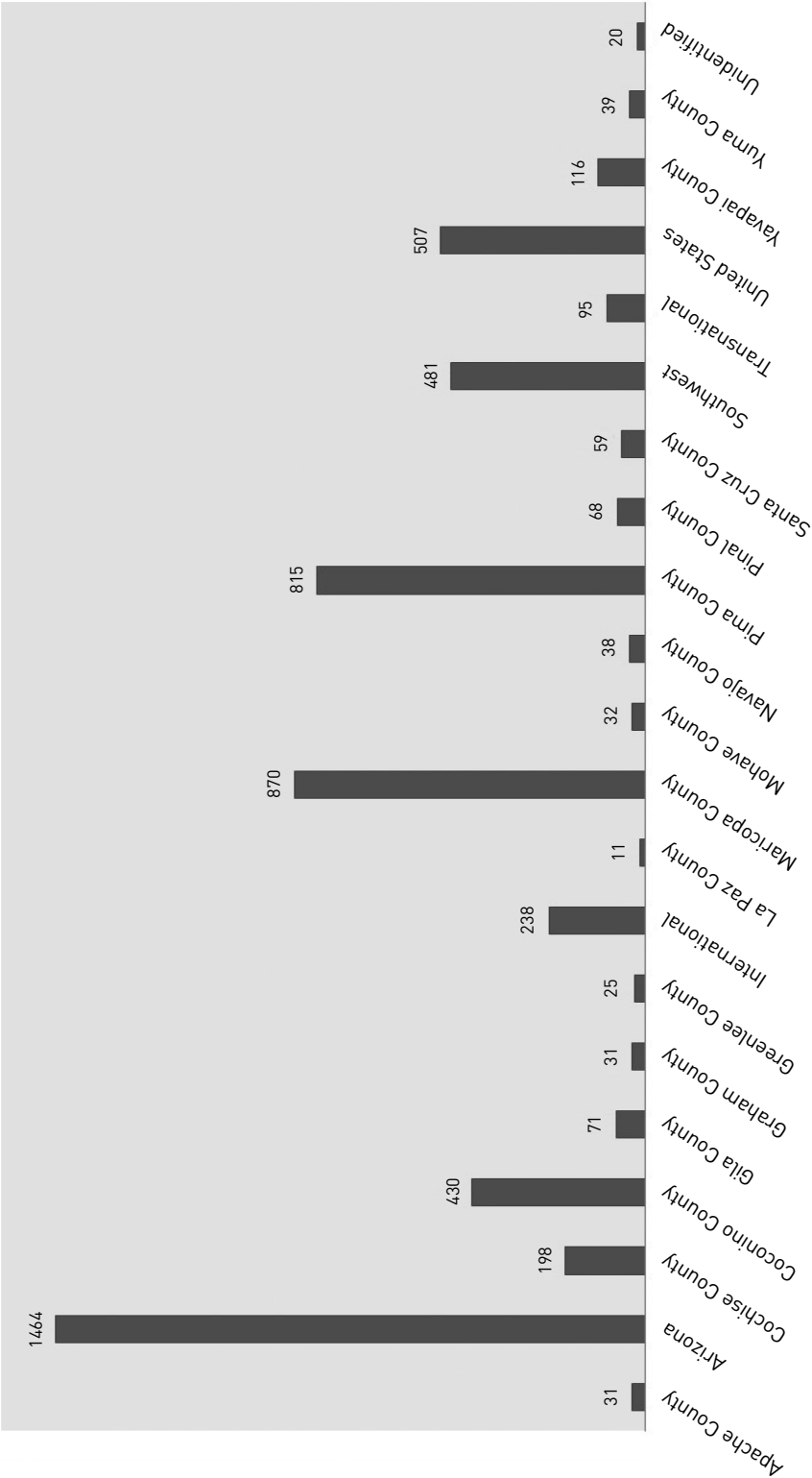
FIGURE 3. This chart reflects the number of collections measured by their geographic coverage.

Geographic coverage	Number of collections
Unidentified	20
Yuma County	39
Yavapai County	116
United States	507
Transnational	95
Southwest	481
Santa Cruz County	59
Pinal County	68
Pima County	815
Navajo County	38
Mohave County	32
Maricopa County	870
La Paz County	11
International	238
Greenlee County	25
Graham County	31
Gila County	71
Coconino County	430
Cochise County	198
Arizona	1464
Apache County	31

Focusing on their specific topical collecting foci, most participants felt that their collections fit into their collection development plans, whether they were articulated in a formal document or just the result of thoughtful consideration of the institution's mission. Ninety-six percent of the total number of collections and 98% of linear footage of collections were felt to be within an institution's scope. While the top subjects selected by the participants were compelling, the results were not very surprising (see Table 1).

Table 1. Most Represented Subjects

	Most Represented Subjects by Number of Collections	Most Represented Subjects by Linear Feet of Collections
1	Education	Politics, Politicians, Government
2	Politics, Politicians, Government	Education
3	Business, Industry, Finance	Law and Legal Issues
4	Native American	Business, Industry, Finance
5	Pioneers	Music, Cinema, Performing Arts
6	Mining	Science and Technology

Considering the vast quantity of materials held by the State Archives, NARA at Riverside, Arizona State University, Northern Arizona University, and the University of Arizona, Matrix working group members anticipated that the top three subjects would be well documented, taking into account that government archives and university archives/special collections tend to collect government, business, and education-oriented materials. Overall, 78% of the total linear footage collected encompassed these top 3 subjects. Another noteworthy observation is the number of institutions reportedly holding Native American collections, yet that subject had some of the lowest linear footage counts. This would indicate an abundance of small collections that are likely not comprehensive in their coverage of this topic. It also highlights the notable absence of collections held by tribal colleagues who chose not to participate.

As indicated by Table 2, a number of subjects are underrepresented, having been selected only 4 to 14 times overall. While the Matrix working group anticipated that collections documenting Arizona's statehood would be small (most information being housed in the State Archives), it did not anticipate other subjects on the list. Documenting the LGBTQ community was hypothesized to be low due to its relatively new focus as a topic of research, as compared with other populations such as Native Americans that anthropologists have researched for decades. Issues of privacy may minimize the documentation of alternative communities. The minimal representation of groups like African Americans and Asian Americans may reflect census data, where these communities make up

anywhere from 3% to 4% of the state's population.[19] The working group also posited that many materials about some of these subjects, such as "Climate and Weather," may in fact reside at repositories outside the state.

Table 2. Least Represented Subjects

	Least Represented Subjects by Number of Collections	Least Represented Subjects by Linear Feet of Collections
1	LGBTQ	Alternative Communities
2	Alternative Communities	African American
3	Ethnic Populations	Migration/Immigration
4	Climate and Weather	Asian American
5	Asian American	Arizona (Statehood)
6	Arizona (Statehood)	LGBTQ

The date range field was constructed as a fixed drop-down by decade. Not surprisingly, the number of collections in the mid-twentieth century demonstrates a "paper explosion" from the 1930s through the 1960s. And, while more recent materials may not yet have made their way to the archives due to retention schedules, some of these low numbers may hint at the increase in digital materials.[20] These data suggested to the working group that institutions continue to grapple with digital media and its acquisition. Some summit attendees pointed out that most archivists are passive collectors of older information rather than active gatherers of new materials. Members of the Matrix working group recognized that surveys done in the future could not ignore the increase in digital materials, but no one had a solution for dealing with this dilemma considering the temporal, fiscal, and technological constraints of the project.

The amount of unprocessed materials was also significant. As part of the data collection, institutions readily provided information about both their processed and unprocessed collections. Overall, 32% of the collections were unprocessed, while 46% of total linear feet were unprocessed. Some of this may reflect differing definitions of "processed" in each institution. Several summit attendees remarked that they had, or were interested in, implementing MPLP in their repositories to tackle their backlogs. It was hoped that many undocumented subjects would appear in the unprocessed collections, yet no startling difference surfaced between what subjects were documented in processed versus unprocessed collections.

Another variable collected was the amount of patron access to collections. Participating institutions were asked to determine—for each collection—whether or not it is available for research or if any restrictions would impede access. As most institutions responding were state agencies, very few could place outright

restrictions on access. Seventy-two percent of the number of collections (both processed and unprocessed) are completely accessible for research, while 27% are accessible with some conditions. Only 1% are outright inaccessible. Similar trends were seen with the total linear footage of collections: 63% are completely accessible, 36% have some conditions, and 1% (just under 600 linear feet) are not accessible for public viewing.

Considering only the accessibility of unprocessed collections, 76% are accessible with conditions, 21% are completely accessible, and 3% are not accessible at all. Conversely, only 2.5% of processed collections are accessible under certain conditions, and 0.002% of processed collections are not accessible at all. These trends should be encouraging for patrons who perceive unprocessed collections as roadblocks to research.

Successes and Challenges of the Matrix

Participating in the Matrix project has been a rewarding activity, both individually and collectively. Contributors remarked that the exercise helped them better understand their own collections and identify their repositories' strengths and weaknesses. Moreover, the survey helped archivists and researchers in Arizona gain a better grasp of each institution's greatest assets. The Matrix project has armed archivists with the power to point researchers and donors toward the most appropriate institutions—to realize where the richest mining collections are, where the most ranching collections reside, and so on. Furthermore, the survey also showed archivists that they are acquiring collections they should not. Government records occasionally showed up in the Matrix results; this provided an opportunity to discuss statutes and regulations that require return of records to both federal and state agencies.

One of the unanticipated results of this project was the ability to locate and potentially unite collections split across repositories. Making all raw data files available to participants online eased the ability to "see inside" another institution and its holdings. A number of institutions reported that they discovered they hold portions of collections distributed elsewhere in the state. The potential for a collaborative project between such institutions excited many participants. In fact, soon after the study, two institutions with parts of one specific collection began to collaborate through a statewide online collections portal to unite the collection intellectually.[21] Additionally, through breakout sessions, summit participants were able to informally designate certain repositories as specialists in particular subject areas, which effectively advanced discussions regarding deaccessioning and transferring records. One lighthearted approach to deaccessioning and reappraisal was suggested by Karen Underhill of Northern Arizona University's Cline Library, who proposed an annual "Archives Swap Meet" to be

held in conjunction with the Archives Summit. Archivists were encouraged to bring collections they felt were better suited to another repository; this swap meet is now in its third year as a regular part of the summit meetings.

Dissemination of the Matrix results also encouraged archivists around the state to take responsibility for addressing issues of underdocumented communities and subjects, either as collectors, or as facilitators and collaborators. One participant recommended that archivists volunteer their repositories as destinations for such collections, adding them to collection development policies and developing relationships with community groups to plan for the transfer of their archives. For instance, Rob Spindler, university archivist and head of Arizona State University's Department of Archives and Special Collections, volunteered his institution as a destination for LGBTQ-oriented materials. Another archivist suggested that representatives from the larger institutions (the State Archives, Arizona State University, Northern Arizona University, and the University of Arizona) work with smaller repositories such as local historical societies to bring their collections into the survey. Such mentoring was seen as beneficial for paraprofessionals unfamiliar with archival basics who had been suddenly tasked with managing their institution's archives.

Collaboration was also encouraged outside the parameters of the project. Northern Arizona University's Cline Library is partnering with institutions with a common geographic and/or subject focus. As a central repository in the region with higher staffing levels, budgets, and technological infrastructure, Cline Library presently hosts digital content curated by the Arizona Historical Society's northern division, the Hopi Cultural Preservation Office, and the Navajo Nation Museum.[22] These partnerships widen research opportunities, highlight resources available elsewhere, and help fill documentary gaps.

Following the dissemination of the updated Matrix results at the 2012 Archives Summit, archivists began to discuss using the Matrix data to address issues of underdocumented topics and communities. One breakout session focusing on how to improve underdocumentation had mixed results—some groups felt that subjects simply needed to be allocated to particular institutions, while others argued that the results merited deeper discussions about *why* some subjects and communities are underdocumented.

Discussions at the 2013 Archives Summit yielded much more fruitful results. Breakout session leaders prompted participants to view the session not as a means of dividing up the underdocumented and targeting them, but to analyze critically the reasons those areas were underrepresented and perhaps to accept that, despite their best intentions, the state's archivists are not going to collect all subjects. For instance, the "Alternative Communities" group agreed that targeting this as a subject for collecting poses a number of logistical and ethical issues. Describing a group as "alternative" can be something of

an "othering"[23] exercise that Matrix steering committee members were hesitant to foster. Furthermore, many groups that fall into this category may prefer to fly under the radar. As such, outside representation (e.g., archivists) may tend to objectify these communities and present them as subjects for observation, rather than as active agents of their own history.

Successes with the project aside, several obstacles also threatened the legitimacy of the data. The working group initially desired that the project be as inclusive as possible. However, nearly every institution represented in the Matrix could easily be mapped on the I-10 and I-17 freeways, leaving many of the more rural parts of the state fully unrepresented. Without outlying participants (particularly small historical societies, museums, churches, cultural centers, businesses, etc.) in the survey, the working group felt that it did not achieve its goal of gaining a more complete view of over- and underdocumented topics and communities in Arizona. The lack of participation may have been due to a lapse in actively publicizing the project, but most nonparticipants reported that their institutions were understaffed and that they had other priorities, such as working on their backlogs or even just fighting to keep their doors open. From a project management perspective, the working group was doing this voluntarily and could not devote large amounts of time to it. Whereas previous large-scale surveys of collections were specifically funded, the working group had no resources from which to support its work.[24]

Similarly, the project unknowingly excluded relevant institutions and agencies outside the state's borders. Invitations to participate in the project were nearly all sent to repositories in Arizona, whereas broader national institutions that contain materials about Arizona—but are located outside the state— were omitted. It was not until late 2012 that the National Archives and Records Administration at Riverside (California) submitted its extensive federal holdings related to Arizona to the Matrix working group. This troubling oversight means that, very likely, other collections reside in multiple repositories across the country and internationally that had the capacity to better inform the survey, particularly when looking at underdocumented communities.[25]

The working group was also hampered from a technical standpoint. None of the members in the group had any extensive background in survey design, a limitation that likely resulted in much of the quantitative data being rendered statistically invalid. Further, no allowance was made for researching effective survey design, as the large nature of the project and limited resources left the working group little time to complete prescribed deadlines. The survey instrument was cumbersome. The use of Excel spreadsheets meant that the tool could be used by any number of institutions with the basic Microsoft Office Suite, but the application had serious limitations. It was impossible to gather very robust statistical data about the breakdown of primary and secondary subjects

and their physical extent, and it was difficult to update the master spreadsheet with new or modified information. For instance, when the Arizona Historical Foundation (AHF)—which had previously participated in the project—closed its doors in 2011, the AHF archivists deaccessioned and donated collections to institutions throughout the state. Recipients of those collections were then voluntarily responsible for informing the working group about the collections' new custody arrangements.

It was clear from discussions at the annual Archives Summit that, despite the best efforts at improving the survey instrument and supporting documentation, limitations still left some participants challenged by the survey's rigid format. One area of concern was the expression of all formats in linear feet. In addition to manuscript materials, this would now include photographs (negatives, prints of all types), oral histories and audio recordings as transfixed on any particular medium, moving images (any medium), and cartographic materials. Regardless of the unique ways each of these media formats are physically described, all materials related to one collection were requested in linear feet. This was the simplest way for the working group to work with data related to such a voluminous amount of materials. Left unanswered was how electronic records were to be accounted for; the working group did not discourage participants from submitting electronic records and assigning their own linear footage in these instances, but no specific instructions were given about how to quantify materials not affixed to a physical medium. One exception was made: at the request of the State Archives, the survey instrument added microfilm as a separate physical extent.[26] This did not skew the final data as the State Archives was the only institution to denote any microfilm in its collections.

One other major challenge faced by the Matrix working group was the inability to collect uniform data from participants. Despite the working group's efforts to provide a basic set of definitions with the survey, issues of miscommunication remained. Some institutions felt differently about the makeup of a processed collection: one representative argued that having an accession record online constituted a processed and accessible collection, while others argued that a baseline level of arrangement and description should be necessary for a collection to qualify as processed. Still others remarked that their legacy finding aids were so difficult to navigate that they were hesitant to call those collections processed. On a broader level, some were challenged by the definitions of "primary" and "secondary" source materials. One institution reported that its vertical file of published materials was an archival collection.

Ethical Implications of a Metrics-Based Approach

Despite the best intentions of archivists around the state, the push to pursue the records of underdocumented communities was problematic. The Archives Matrix project reveals much about the categorization and prioritization of what are perceived as the critical subjects in the state and how individual and collective acquisition behaviors reflect these values. The project offers insight into the state's collecting strengths and weaknesses but also into the shortcomings of undertaking such a project. The project demonstrates the difficulty of trying to slot Arizona's diversity into limited taxonomies. Like census records, the data collected are problematic in that they create what Benedict Anderson might call a "totalizing classificatory grid." He suggested that "The effect of the grid was always to be able to say of anything that it was this, not that; it belonged here, not there. It was bounded, determinate, and therefore—in principle—countable."[27] Such an approach necessarily creates and reinforces binaries and has an "othering" effect that further marginalizes and alienates certain communities and subjects.

The very logistics of the Matrix project brought to light some of the shortcomings in the way information professionals approach what they do. Through this project, the working group aimed to gather metrics on the state's collections by mapping them within a grid of categories, date ranges, geographical categories, and physical extents. But records, like humans, are far more complex than what grids can accommodate. Many of the collections are multifaceted and cannot be pigeonholed into just two categories.

There was also concern about representation and self-representation. The working group grappled with the realization that Arizona has been a hotbed of archaeological and anthropological research, resulting in vast records relating to Native American communities throughout the state and the greater Southwest. Though institutions collectively reported 296 Native American collections, an entirely different study could be done on how many of these collections enable self-representation.[28] As Anne Gilliland and Sue McKemmish remarked, "The documentation created by anthropologists and others who observe and study communities and cultures also does not substitute for the materials a community generates for and about itself and upon which it relies. Moreover, such documentation might itself constitute a misappropriation of cultural or community knowledge from the perspective of the communities documented therein."[29] Shauna McRanor similarly noted that, in relation to outsiders collecting First Nations oral documents, "the impetus to fix oral traditions physically has not originated in the communities, in which instance it is not the oral records of a First Nation that are actually documented, but the activities and agenda of the initiators, such as anthropologists or archivists."[30] Current archival practice

supports this position, with the creator of such a collection being attributed to the individual holding the recording device rather than the narrator(s) being recorded. Undoubtedly, early archival theorists did not intend such efforts to have a paternalistic connotation, but as the shift toward self-determination is realized—particularly in indigenous communities—these practices will continue to be challenged.

This project has perhaps propelled the conversation regarding underrepresented groups into postmodern dialogues within the archives community. What is the role of the archivist in filling the gaps? Considering the demographics of Arizona's archivists (largely white, middle class, educated), is our well-intentioned effort to collect the uncollected more patronizing than productive? Often in the absence of documentary evidence of a community or subject, archivists tend to see oral history as a panacea for filling gaps. While oral history does serve an important function in the state, we must perhaps also recognize that not all communities or subjects can be documented in traditional archives—they may show up more in the study of cultural products such as music, art, and clothing. Indeed, archival materials created in many indigenous communities that are manifest in a physical medium uncommon to Western archivists continue to challenge traditional paradigms and force the discipline to accommodate new ontologies and their respective records.[31] Privacy is also an important issue for many communities, with some citing safety concerns while others speak from years of exploitation and stereotyping by a dominant society. Elise Chenier emphasized "the mere act of putting their name to paper risk[s] unwanted exposure that could negatively impact their personal and professional lives."[32]

Rather than moving archivists to fill in the gaps, the Matrix project may ultimately teach archivists to redefine their own responsibilities. As Verne Harris commented in the "Coloring Outside the Lines: Tattoos as Personal Archives" session at the Society of American Archivists meeting in 2012, the activities of archivists must shift away from strict *collecting* and toward *contextualizing*. One might argue that too much contextualization of records reaches too far into the territory of historians. But Harris wrote, "in pressing to reach out to users, to create new users, too frequently archives are opting for the neatly packaged information product rather than the rich contextualisation of text." The archival record, he wrote, is "best understood as a sliver of a sliver of a sliver of a window into process."[33]

Where Do We Go from Here?

In many senses, the Matrix project has been successful. The project reinforced several of the concerns that archivists have expressed: Arizona's archival

holdings support a relatively narrow vision of the state as a wild West frontier, where cowboys, miners, and Barry Goldwater have shaped collective identity and memory. Whitaker and Sturgeon commented that "the preoccupation with the Old West comes at a cost. Arizona promotes a mythical, romantic past at the expense of archival documentation of the New West."[34] Such emphasis on this aspect of its history has arguably happened at the expense of other important subjects, such as migration and immigration, the Asian American community, and the growing LGBTQ community. Overall, the state's archival community is concerned with these lapses in the historical record and aims to develop a more inclusive body of records.

Members of the Matrix working group agree that to improve the project and make it sustainable requires funding, first and foremost. This would ensure that a programmer could be hired to create more effective and efficient software. Members of the group also feel that an itinerant archivist could travel around the state to collect data, assist archivists in filling out surveys, but also educate volunteers and nonarchivists at smaller institutions about differences between, for instance, archives and newspaper clippings collections. Such consultants might also provide some insight into how to gather information on formats not included in the Matrix, such as digital records.

A metrics-based collaborative collections analysis project is not for the faint of heart. While such an undertaking can be immensely rewarding, it can also highlight disagreements about what constitutes an archives, how "processed" is defined, and how much access is appropriate. It can also touch sensitive nerves with regard to wedging a state's collective history into a set of predefined subjects, or determining whether collections truly represent (or in some cases, misrepresent) those subject areas. Moreover, in an eagerness to demonstrate a progressive, social justice approach to archival collection development, archivists must be careful that they do not attempt to misappropriate the voices of underdocumented communities. These communities should be given the opportunity to document themselves, or to opt out of the archival record should they choose. A future project also needs to establish stronger relationships with those believed to be underdocumented. As Elisabeth Kaplan cautioned, "Archivists seeking to balance the record, to incorporate authentic voices, to resolve the problem of the underdocumented, or even, sometimes, to celebrate diversity must reify identity, thereby making cultural differences immutable and eliminating individuality, personality, and choice within the group in question. All of this requires an essentialist outlook."[35]

At this point, members of the Matrix working group question the sustainability of the project. Without funding or staff time in many institutions, and with enthusiasm waning, it may be time to close the book on the data collection and collation chapter—at least for now. But taking what has been learned from

the Matrix, archivists can proceed in forging new relationships and facilitating a more culturally responsible documentary heritage—one that encompasses more communities and subjects, enables them to self-represent, and accepts that silences and gaps are an organic part of the archival record. Moving into the next hundred years of statehood, archivists have the opportunity to assist in redefining Arizona's history as richer than simply cowboys on the wild frontier. After all, Jacques Derrida wrote, "the question of the archive is not, we repeat, a question of the past. . . . It is a question of the future, the question of the future itself, the question of a response, of a promise and of a responsibility for tomorrow."[36]

Appendix A—Matrix Instructions and Examples

1. Please print out and complete the Arizona Archives Matrix form and send it back to the address noted on the form. This form can be sent back at any time, preferably soon after receiving this package and the instructions contained within. The matrix itself can be completed at your own pace.
2. The matrix uses Microsoft Excel 2003 as its mode of data entry. Any user using a PC or Mac operating Microsoft Office 2010/2011 or an earlier version of Excel should be able to open this document and fill in the requested fields.
3. If you have any concerns or are needing clarification of instructions, you may contact [name removed].
4. Upon finishing filling out the matrix, email your institution's matrix Excel spreadsheet to [name removed]. He will acknowledge receipt of your spreadsheet with a brief thank-you note.

Matrix Fields

Title of Collection
Please provide the title of the collection that reflects the *creator* of the collection as opposed to the *donor*. For example, if John Smith donated 8 boxes of textual material from the Dudziak family, this would be refered to as the Dudziak Family collection rather than the John Smith collection. If one creator's collection has been received in several different donations (or *accessions*), please describe all accessions as **one** singular collection in the matrix. Similarly, if your institution *physically* separates manuscripts, photos, maps, moving images etc., but *intellectually* maintains links between these media formats because they share a common creator, please describe this creators' multiple media as **one** singular collection in the matrix.

Note: Please include **both** processed *and* unprocessed (portions of) collections in the survey tool.

Please also remember that we are interested in information related to **original**, **unique**, **nonpublished** collections in your institutions. Unless their exclusion as **part** of an archival collection would result in a diminished understanding of the collection as a whole, we would ask that you exclude published books, journals, and subject file contents that would normally be found in multiple institutions.

Primary and Secondary Subject

Select one of 45 subjects from a drop-down list that most encompasses the primary focus of the collection from the Primary Subject field. Definitions of each subject appear as a glossary at the end of these instructions. If a secondary subject is important to better describe the collection, you may **voluntarily** select a second subject from the drop-down list in the Secondary Subject field. This Secondary Subject field is not a required field and can be left blank. If any of the selectable subjects do not accurately reflect your collection, select 'Other' and please leave a comment in the Comments field, located in the last column of the matrix.

In Collecting Scope (Y/N)

Consider whether or not the collection reflects the mission statement, collecting scope, or long-term vision of your instutition. If your institution has a Collection Development Policy/Plan, you may wish to refer to this document when evaluating each collection.

Geographic Location

Select from the available options to determine which geographic region best encompasses the collection as a whole. If a collection crosses multiple counties, select a broader level that will encompass all regions (e.g. 'Arizona,' 'Southwest,' 'United States').

Beginning/End Date Range

From the pull down menu(s), select the decade(s) that are inclusive and encompass the collection and its creation as a whole. If your collection was created strictly in the 1980s, you need only select '1980s' from the pull-down menu option in the Beginning Date Range column. Leave the other column blank. Conversely, if your collection covers a period of several decades, please select the beginning decade from the Beginning Date Range column and the ending date from the End Date Range column.

Processed (Y/N)

As the term 'processed' has been referred to different stages in the completion of work with an archival collection, the definition of 'processed' has been left to each individual repository to determine what 'processed' means to them. For example, some institutions would consider a 'processed' collection to be one that has been described and made available online with a thorough finding guide with little physical handling of material. Others would consider it 'processed' if the collection has been physically re-housed, arranged, and described in *any* sort of paper/online finding guide. **NOTE:** If you feel that your collection is physically unprocessed, yet you have made some/all of it available online, use the column titled *Available to Researchers* to note this information.

Select 'Yes' if the collection, in your eyes, has been processed. Select 'No' if you feel that the collection remains unprocessed. Select 'Yes and Additions Anticipated' if the collection has been processed AND you expect future additions/accruals to this processed collection. Select 'No and Additions Anticipated' if the collection remains unprocessed AND you expect future additions/accruals to this unprocessed collection.

Physical Description (approximate linear feet)
Excluding microfilm reels (there is a separate adjacent field for this), consider the physical space that this collection encompasses in its present state (NOT including anticipated accruals). Measure this in **linear feet** as a **number only**. This field should **not** contain any alphabetical characters. If a collection consists partially and/or exclusively of electronic records that are not affixed to a physical medium (ie: only located on a server), please describe these in the Comments column at the end of the matrix.

Microfilm (approximate size in # of rolls)
If any part of your collection (partially/entirely) consists of microfilm, please note how many rolls of film are present. This medium has been uniquely isolated in the matrix because despite its size, it has the potential to contain a very large amount of textual information that has been substantially reduced in size.

Available to Researchers
Select 'Yes,' 'No,' or 'Yes with Conditions' to denote when a collection has unique access conditions or restrictions. Examples can be issues related to cultural sensitivity, privacy restrictions, or may also highlight that an unprocessed collection has been made available to researchers. Any additional comments about unique restrictions can be noted in the adjacent Comments column.

Comments
This voluntary column allows you to describe unique collections and some complexities that are not readily addressed from the previous columns and the questions being asked. Feel free to write as much as you wish—your comments will wrap and **not** run into the row below.

Matrix Subject Term Definitions

Activism, Human Rights, and Advocacy—The social, political, economic, or environmental efforts to bring about change. This action is in support of, or opposition to, one side of an often controversial argument. Examples: Civil Rights, street marches, strikes, sit-ins, barricades, lobbying groups, or media campaigns. See also: **Social Organization and Activity**.

African American—Americans of African descent.

Agriculture—Includes farms, farming (both family farms and corporate or commercial farms), agribusiness, free-range farming, and organic farming. Examples: Dairy farming, food crops, orchards, citrus, poultry or pig farms. Does not include cattle, livestock or sheep, see **Ranching**.

Alternative Communities—An intentionally created community that typically holds a common social, political, religious, or spiritual vision and often follows an alternative lifestyle. Examples: Amish, communes, cults, or gypsies. See also: **LGBTQ**.

Anthropology and Archaeology—Includes cultural, social, linguistic and biological anthropology, ethnography, and the study of human origins and society. Examples: Excavation sites or digs.

Architecture—The process and product of planning, designing and constructing works in the material form of buildings.

Art—Includes materials related to individual artists, artwork, and arts-related business. Does not include architecture, music, or the performing arts.

Asian American—Americans of Asian descent.

Borderlands—issues related to land located at a border. Example: transnational business, export/import, Arizona/Mexico border. See Also: **Migration/ Immigration**.

Business, Industry, and Finance—includes corporate, private business, trading posts operated by Anglos and non Native Americans.

Climate and Weather—Includes both short-term weather changes (including rainfall, humidity, and temperature), as well as the long-term effects of climate change. Example: monsoons, haboobs.

Communication and Journalism (non-fiction)—process of transferring information from one entity to another. This can include newspapers, radio, or other mechanism or outlets for the dissemination of information. Mass media.

Education—schools and educators, Includes primary and secondary education, higher education, universities.

Engineering—related to the design and construction of buildings, dams, bridges, and other structures. This category focuses primarily on civil, industrial, and mechanical engineering. See also: **Architecture**. For chemical and software engineering, see **Science and Technology**.

Ethnic Populations (other than Asian, Latina/o, African American, PLEASE SPECIFY in the Comments field).

Forestry—records related to the development, care and cultivation of forests. This includes research, surveying and management of forests and forestlands.

Genealogical Records—records related to the study of families and/or the tracing of their lineages and history.

Geography—records related to the study of the earth and its features and of the distribution of life on the earth, including humans and the effects of human activities.

Geology and Paleontology—records related to the history of the earth especially as it relates to rocks and fossils.

Labor—records related to work, collective organizations of working people (*who may campaign in their own interest for better treatment from their employers and governments, particularly through the implementation of specific laws governing labor relations*) and organizations of businesses and industry groups. This can include labor unions, trade unions, manufacturing organizations as well as organizations that support specific "management" organizations (as opposed to labor unions).

Latino/Latina/Chicano/Chicana—records related to Americans with origins in the Hispanic countries of Latin America or in Spain.

Law and Legal Issues—records related to courts and court cases (both civil and criminal), criminal justice, prisons, and civil liberties.

LGBTQ—(Lesbian, Gay, Bisexual, Transgender, Queer and/or Questioning)— records relating to sexuality and gender identity-based cultures. This category also includes asexuality.

Literary Figures/Small Press (fiction)—includes writers of fiction, poetry, essays, and small, privately operated presses.

Medical/Healthcare—records of health institutions, practitioners and research.

Migration/Immigration—records related to the physical movement by humans from one district to another. See also: **Borderlands**.

Military—records related to individuals who serve(d) in any branch of the military.

Mining—records from individual miners and mining operations. See also: **Geology and Paleontology**.

Music, Cinema and Performing Arts—records relating to the disciplines of music, dance, drama, spoken word, theater, film, filmmaking and are dependent upon the presentation to the attention of observers through the live or recorded actions of the performers.

Native American—records related to the history and culture of indigenous people in the United States, and Canada, including Native Hawaiians.

Non-Profits—records related to or created by non-profit organizations. Non-profits do not distribute surplus funds to owners or shareholders, but instead use them to help pursue the organization's goals.

Pioneers—records about early settlers.

Politics, Politicians, and Government—records related to politicians, political campaigns, and government agencies. See also: **Law and Legal Issues**.

Ranching—records related to the operation and practice of raising and grazing livestock, such as cattle and sheep. See also: **Agriculture**.

Recreation and Leisure—records related to recreational activities and leisure past times, such as non-competitive physical exercise, sledding, hunting, fishing, yoga, reading groups, and hiking. See also: **Sports**.

Religion—records related to any set of beliefs concerning the cause, nature, and purpose of the universe, especially when considered as the creation of a supernatural agency or agencies, usually involving devotional and ritual observances, and often containing a moral code governing the conduct of human affairs. Examples: Judaism, Buddhism, Church of Jesus Christ of Latter Day Saints, and Catholicism.

Science and Technology—records and research related to scientific investigation and the development and use of technology. Examples: astronomy and computer science. Does not include these other subjects: **Geology and Paleontology**, **Geography**, **Engineering**, and **Climate and Weather**.

Social Organization and Activity—records related to the participation by individuals, families, businesses, and other community groups who seek the betterment of society through involvement with—and donation to—benevolent/ charitable/philanthropic/humanitarian organizations. Such organizations are not part of the government and do not include for-profit businesses. Examples: inlude Masons, Shriners, Red Cross. See also: **Activism, Human Rights, and Advocacy**; **Non-Profits**.

Sports—records related to professional/amateur team and individual sports, competitive amateur sports, and individuals who participate in competitive activities based on some degree of physical athleticism. See also: **Recreation and Leisure**.

Statehood (Arizona)—records related to the founding of Arizona as a state (1912) within the United States of America.

Tourism—records created as a result of activities, promoting and describing travel for leisure, recreational and entertainment purposes. See also: **Recreation and Leisure** and **Transportation**.

Transportation—records related to the movement of people and goods from one location to another. This includes the infrastructure, vehicles and operation related to the movement of people and goods. See also: **Migration**, **Recreation and Leisure**, and **Tourism**.

Water—records related to water use, preservation, research, and rights.

Women—records pertaining to the history and activities of women and organizations dedicated to recognizing the accomplishments of women.

Other—records related to subjects not listed above. Please provide comments in the **Comment Field** to help us better understand the subject matter of this collection.

Notes

1 Howard Zinn, "Secrecy, Archives, and the Public Interest," *The Midwestern Archivist* 2, no. 2 (1977): 14–26, p. 25.

2 Linda A. Whitaker and Melanie I. Sturgeon, "The Arizona Summit: Tough Times in a Tough Land," *Journal of Western Archives* 1, no. 1 (2010): 18, http://digitalcommons.usu.edu/westernarchives/vol1/iss1/3/.

3 Whitaker and Sturgeon, "The Arizona Summit," 6.

4 Frederick Jackson Turner's "Frontier Thesis" was outlined in his essay, "The Significance of the Frontier in American History," published in 1893. Turner believed that the conquest of the American Frontier shaped the rugged and self-reliant character of Americans.

5 John Irwin, *Preserving Arizona's Historical Records: The Final Report of the Arizona Historical Records Needs and Assessment Project* (Phoenix: Arizona Department of Library, Archives, and Public Records, 1983).

6 Irwin advocated for a new building to house the State Archives as the-then current building was filled to capacity. Through the advocacy and lobbying efforts of the Friends of Arizona Archives, the Polly Rosenbaum Archives and History building was completed in 2009.

7 Boles used Arizona Archives Online (www.azarchivesonline.org), the Arizona Cultural Inventory Project (http://cip.azlibrary.gov), and some institutional databases (libraries at Northern Arizona University, Arizona State University, and the University of Arizona; and the Arizona Historical Society) to find relevant data.

8 See Whitaker and Sturgeon, "The Arizona Summit."

9 Mark A. Greene and Dennis Meissner, "More Product, Less Process: Revamping Traditional Archival Processing," *The American Archivist* 68, no. 2 (2005): 208–63.

10 Attendance grew with each meeting of the Archives Summit, reaching over 60 archival professionals by 2013.

11 Gabriele G. Carey, *Envisioning Oregon: Planning toward Cooperative Collection Development in Oregon Historical Repositories* (Brea, Calif.: History Associates Incorporated, 2009), https://scholarsbank.uoregon.edu/xmlui/bitstream/handle/1794/9792/LSTA%20Envisioning%20Oregon%20Final%20Report-1-1.pdf?sequence=1.

12 Carey, *Envisioning Oregon*, Appendix 2.

13 This 50% was the benchmark preferred by the planners of the archives summit as expressed in the NHPRC grant narrative.

14 For example, a popular subject like "Law and Legal Issues" disguised many less-selected subjects within, such as "Immigration/Migration," "Ethnic Populations," and "Activism, Human Rights, and Advocacy."

15 The definition of "processed" was left up to each institution to determine uniquely, but some examples of the term were provided in the instructions. Richard Pearce-Moses's broad definition of "processing"—"the arrangement, description, and housing of archival materials for storage and use by patrons"—did not accurately alleviate the confusion some institutions had with the term. Pearce-Moses, *A Glossary of Archival and Records Terminology* (Chicago: Society of American Archivists, 2005), http://www2.archivists.org/glossary.

16 In addition to being an outlet to disseminate data, the project website, Arizona Archives Matrix, http://azarchivesmatrix.org, has all documentation for potential participants, including an introductory letter, instructions, definitions, subjects, and a permissions form to be signed and submitted to the working group.

17 Several tribal archivists expressed an interest in seeing the current project developed further as a basis for collaborative tribal collection development and management. Peter Bungart, senior archaeologist for the Hualapai tribe, experimented with some modifications to the Matrix with this goal in mind.

18 Institutions included the Arizona Historical Foundation; the Arizona Historical Society (Tucson); the Arizona State Library, Archives and Public Records; the Arizona State Museum; Arizona State University; Arizona State Hospital; Embry-Riddle Aeronautical University; Lowell Observatory; the Museum of Northern Arizona; Northern Arizona University; the Postal History Foundation;

Sharlot Hall Museum; Thunderbird School of Global Management; the University of Arizona Special Collections; National Archives and Records Administration at Riverside (California); the University of Arizona Archive of Art; and the University of Arizona College of Medicine.

[19] "State and County Quickfacts, Arizona" United States Census Bureau, http://quickfacts.census.gov /qfd/states/04000.html.

[20] For the purpose of this particular survey, steering committee members opted not to include digital materials, as creating a standard physical volume field would have been difficult.

[21] The Museum of Northern Arizona and Northern Arizona University's Cline Library used the Arizona Memory Project (http://azmemory.azlibrary.gov) to unite the records of the Day family, a pioneering family in the region.

[22] Northern Arizona University, Cline Library Special Collections and Archives, http://archive.library. nau.edu/.

[23] Originally defined by Gayatri Chakravorty Spivak as "a process by which the empire can define itself against those it colonizes, excludes and marginalizes." Bill Ashcroft, Gareth Griffiths, and Helen Tiffin, *Key Concepts in Post-colonial Studies* (London: Routledge, 1998). The term refers to the creation of an "us versus them" binary.

[24] See for example, Dale Alexander Stirling, "Documenting Alaska's Past: The Alaska Records Survey," *The American Archivist* 50, no. 3 (1987): 400–401; Heather Watts, "The Canadian Unitarian-Universalist Record Survey," *Archivaria* 30 (Summer 1990): 163–66; Bradford Koplowitz, "The Oklahoma Historical Records Survey," *The American Archivist* 54, no. 1 (1991): 62–68.

[25] A search for Arizona materials at the ONE National Gay and Lesbian Archives in Los Angeles (through the Online Archive of California, http://www.oac.cdlib.org) revealed 21 collections containing information about the state.

[26] Many original materials at the State Archives had been microfilmed then subsequently destroyed. State Archivist Melanie Sturgeon felt that if researchers were to use the Matrix, it was important for them to be aware that 30 rolls of microfilm are not the same as 1 linear foot of materials.

[27] Benedict R. O'G. Anderson, *Imagined Communities: Reflections on the Origin and Spread of Nationalism* (London: Verso, 2006), 184.

[28] These discussions were more in-depth at a Native American Archives Symposium held in Flagstaff in October 2012, in which members of tribes and the archives community considered paradigm shifts from Native Americans as subjects toward Native Americans as collaborators. To view videos and slides from keynote speakers, please visit the Arizona Archives Alliance, http:// arizonaarchives.org/symposia/na.

[29] Anne Gilliland, Susan McKemmish, Kelvin White, Yang Lu, and Andrew Lau, "Pluralizing the Archival Paradigm: Can Archival Education in Pacific Rim Communities Address the Challenge?," *The American Archivist* 71 (Spring/Summer 2008): 90.

[30] Shauna McRanor, "Maintaining the Reliability of Aboriginal Oral Records and Their Material Manifestations: Implications for Archival Practice," *Archivaria* 43 (Spring 1997): 76.

[31] McRanor, "Maintaining the Reliability of Aboriginal Oral Records."

[32] Elise Chenier, "Hidden from Historians: Preserving Lesbian Oral History in Canada," *Archivaria* 68 (Fall 2009): 258.

[33] Verne Harris, "The Archival Sliver: Power, Memory, and Archives in South Africa, *Archival Science* 2 (2002): 83–84.

[34] Whitaker and Sturgeon, "The Arizona Summit," 7.

[35] Elisabeth Kaplan, "We Are What We Collect, We Collect What We Are: Archives and the Construction of Identity," *The American Archivist* 63, no. 1 (2000): 148.

[36] Jacques Derrida, *Archive Fever: A Freudian Impression* (Chicago: University of Chicago Press 1996), 36.

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