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The Value-Added Language Archive: Increasing Cultural Compatibility for Native American Communities

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Language archives represent a complicated theoretical and practical site of convergence for Native American language communities. In this article, I explore how functionality and operation of language archives are misaligned with core sociopolitical priorities for Native American tribes. In particular, I consider how the concept of cultural and political self-determination contextualizes lack of use or resistance to participation in language archiving projects. In addition to critical evaluation, I envision a dramatically expanded role for language archives, with the goal of increasing their cultural and political compatibility for Native American groups and beyond. I use the term, ‘value-added language archive’ to describe an archive with features and support services that address emergent needs of a diverse stakeholder community.

1. Introduction¹ The archive as an institution occupies a contested discourse for scholars and members of Native language origin communities alike (Manoff 2004; Mawani 2012). Etymology of the term ‘archive’ stems from a Greek word meaning a place of convergence, where things commence and where authority is commanded (Derrida 1995). Modern archives, including those specific to Native languages, are a convergence of power and possibility. For many Native groups in North America and elsewhere, archives are uniquely complicated sites of cultural exploitation, continuity and renewal.² Memory institutions, as a whole, have a legacy of facilitating processes of colonialism (Richards 1993) and may have acquired collections through unethical methods (Gulliford 1996). While many archives are active partners in cultural heritage repatriation efforts, some continue to replicate colonial power structures and mentalities (Cushman 2013). Archives specific to Native and minority language documentation also share fraught historical connections to colonialism, while they simultaneously work to alleviate its impacts. The vast number of people involved in endangered language documentation advocacy work tirelessly and with the best

¹I would like to thank the anonymous reviewers for their helpful suggestions and my colleague Sue Eleuterio for her comments. I would also like to thank Gary Holton and Ryan Henke for their assistance and support.

²This article focuses on language archives in relation to Native American people and tribal organizations in the United States, though many conclusions have broader applicability in North America and beyond.

intentions, however the institution of archiving is still problematic for many Native communities. The combination of negative historical associations, ongoing language endangerment and lack of documentation management capacity creates a climate of uncertainty for tribes surrounding participation in archiving initiatives. This article seeks to critically explore factors contributing to that uncertainty and identify practical solutions.

In the United States and elsewhere, rates of Native language endangerment generally continue to worsen, though there are important examples of language sustainability success. As a language is used less, or not at all, the products of documentation become more valuable as a source of information. Those products of documentation are important sources of information for a variety of scholarly and cultural revitalization purposes. Native American tribes rely on documentation for numerous purposes including articulating political self-determination, land tenure or resource claims, and education. Application of documentation resources for political, legal and environmental objectives has increased importance as Native communities engage in opposition to development projects that infringe upon their rights and contribute to climate change (see Martello 2004; Fogel 2004). The Dakota Access Pipeline (ND), the Kinder-Morgan Trans-Mountain Pipeline (BC) and the Gateway Pacific Coal Terminal (WA) are three such examples. In each case, tribal capacity to counter development is partially dependent upon information found in documentation. What information exists in documentation, how it is contextualized and who has access is significant—particularly when multi-billion dollar projects are at stake. Accordingly, tribes have interest in greater management of language documentation access and use, for both cultural and political purposes.

Language archives play an important role in preserving the products of documentation and facilitating research, but tribes generally have minimal control over those institutions. Resources in archives are often underutilized by Native communities for a variety of reasons, including lack of management controls, limited discoverability and unclear intellectual property ownership. This situation creates a climate where tribes are hesitant to share their resources with archives—even if the tribe lacks effective storage solutions. In some cases, tribes resist participation in archiving projects all together. As stated by archivist Elizabeth Joffrion and Lummi (WA) scholar Lexie Tom, “sovereignty, self-determination, and self-governance are primary goals of Indigenous nations, and gaining control over their stories, documents, and artifacts is critical to that process” (Joffrion & Tom 2016:9). Language archives have a unique opportunity to support tribal self-determination efforts through development of enhanced tribal management of cultural documentation.

In this article, I explore how functionality and operation of language archives are misaligned with core sociopolitical priorities for Native American tribes. In particular, I consider how the concept of cultural and political self-determination contextualizes lack of use or resistance to participation in language archiving projects. In addition to critical evaluation, I envision a dramatically expanded role for language archives, with the goal of increasing their cultural and political compatibility for Native American groups and beyond. According to the diverse Native communities I

work with, increased tribal capacity for archive management is a clearly needed first step.³ However, a number of features and services, not found in traditional archives, can enhance utility and usability, particularly for Native groups. The *value-added language archive* is the term I use to describe this concept of holistic archiving and wrap around services. As Derrida states, archives are a *convergence* of resources, people and values. For most of their history, the convergence supported by language archives has primarily been academic centric. As we consider how archives can best respond to emergent needs, integration of Native epistemological frameworks in their design, functionality and support has much to offer.

2. Archiving in context Just as the first large international language archives were being founded in the early 2000s, Joan Schwartz & Terry Cook (2002:1) wrote, “archives, then, are not passive storehouses of old stuff, but active sites where social power is negotiated, contested, confirmed.” Archives are dynamic spaces of knowledge production, exchange and mobilization, that are negotiated between stakeholders. Tony Woodbury (2014) identifies three main language archive stakeholder groups: archive managers, academic researchers and language community members. These user groups have overlapping needs for design, function and management of archives. Distinct stakeholder needs make archive design complex, particularly given limited funding. I offer that language archives already meet a comparatively high degree of archive manager and academic researcher needs. Accordingly, this article will primarily focus on increasing political, cultural and technical compatibility for Native American communities. I am encouraged that broad stakeholder support exists for making archives more attractive, accessible and useable for Native American groups.⁴

The process of archiving language depends on both preservation of documentation and its access (Green 2003). As stated by Gary Holton (2014), scholarship around documentation preservation is well established and has addressed many of the most pressing problems, such as interoperability (Bird & Simons 2003), physical degradation (Barwick 2003) and format accessibility (Widlok 2013). Conceptualization of archive access is more nuanced, particularly for use outside academia. Access represents a complicated issue, particularly since funders, academics and Native communities may have competing ideas about its appropriateness.⁵ A particularly challenging issue for many tribal groups, is the idea that archives “grant easy access” (Trilsbeek & Wittenberg 2006:313) to cultural documentation. Since documentation may contain sensitive information, inappropriate access may complicate capacity to affirm and maintain self-determination. At its core, self-determination is simply the idea that Native communities can effectively interpret their past and have a right to make decisions about the trajectory of their present and future. Self-determination is

³Based on research collaborations with Native American and First Nations people in Alaska, California, British Columbia, Oregon, Massachusetts and Washington State.

⁴Broad support for increasing cultural and technical compatibility of language archives for language origin communities was evident at a 2016 National Science Foundation, Documenting Endangered Languages funded workshop organized by Gary Holton and Christina Wasson.

⁵See The Protocols for Native Archival Materials for access and use guidelines specific to Native documentation resources at: <http://www2.nau.edu/libnap-p/protocols.html>

as much an issue of practical concern for tribes, as an ideological one. Accordingly, factors that acutely or indirectly erode its capacity are scrutinized. A brief review of historical context around language archiving is useful to frame the issue of access.

Historically, Native American people have been party to documentation projects but their participation in archiving has often been one sided. Linguistic knowledge from Native community members is typically the object of documentation, but community participation in use and management of that knowledge generally decreases once recorded. The relationship between the production of documentation, the process of archiving and the use of those resources is described as unclear (Derrida (1995), contested (Fourmile 1989; Manoff 2004; Mawani 2012) and fickle (Nathan & Austin 2014). A number of contributions have underscored the need to make language documentation more accountable and inclusive of the language community (Hill 2002; Penfield et al. 2008; Dobrin & Berson 2011; Hovdhagen & Naess 2011; Siefert 2011; Woodbury 2011). Additionally, there has been productive discourse on increasing language community participation in the production of metadata (Garret 2014; Holton 2014; Trilsbeek & Konig 2014) and community or participatory archiving (Shilton & Srinivasan 2007; Huvila 2008; Czaykowska-Higgins 2009; Theimer 2011; Linn 2014; Stenzel 2014). The dynamic field of language archiving has opportunity to continue responding to emergent needs and challenges, as it addresses the ongoing crisis of language endangerment. Empowering Native American communities to take charge of management, use and application of language documentation resources is one direction for innovation.

In thinking about the future of language archiving, it is useful to consider factors that established the relationship between the field of archiving and Native language communities. Over the past 150+ years, fields like Anthropology and Linguistics have operated as crisis disciplines (Schmidt 2005; Chan 2008) in response to the unprecedented endangerment of human knowledge, particularly language. Crisis disciplines react to significant and time sensitive challenges, generally with best intentions. While there is an ongoing tragedy of language loss, crisis and salvage theoretical orientations have adverse consequences. In Anthropology, the salvage era sought to preserve any and all aspects of Native culture prior to their expected disappearance (Duranti 2003). In the late 1800s and early 1900s it was unclear to Franz Boas and other early documentarians if Native cultures in North America would survive disease, assimilation and processes of cultural erasure (Barth et al. 2010). The salvage era produced vast amounts of documentation, but lacked systematic production processes and ethical oversight (Henke & Berez, this volume). Access to those documentation resources for Native descendants has, and continues to be complex.

The field of language documentation also emerged during the salvage era. Similarly, it has been unclear to many language documentarians how the products of documentation would be used in the future. Much documentation occurred with last remaining speakers and without a clear avenue for application in the source community. According to Holton (2014:51), “thoughts of how that [documentation] information might be used, and by whom, were not given high priority.” As a result, there has been a focus on structuring the process of documentation and preservation

with the needs of an imagined linguist 500 years in the future (Woodbury 2003). During and after the salvage era, archive access was fairly restrictive outside of academic settings, especially for Native people (Fourmile 1989). Throughout much of the 20th century many Native people had limited knowledge of the amount of cultural material that was housed in archives about their history, ancestors and culture. The advent of rapid information sharing over the Internet has increased discoverability of documentation resources and has also increased access related concerns for Native communities. Language documentation has entered a new era, marked by dramatically changing technologies and Natives communities who have interest in greater influence. This is an opportunity for archives to build capacity for Native people to assume greater ownership of a broad range of language documentation preservation functions.

Without question, those in the field of language documentation, including archiving, have responded to the rapid and devastating loss of human linguistic knowledge. Efforts to produce quality documentation, description and effective storage of linguistic knowledge make possible language reclamation and revitalization projects, such as those of the Miami language (See Baldwin 2003, 2015). Archives effectively preserve resources, sometimes for unknown periods of time and possibly after a language origin community no longer exists. However, is it enough that archives enable research and store resources in the expectation that they will eventually be used by Native language communities? The tribes I work with are largely seeking a more direct and immediate application of their cultural heritage. Native communities value information preservation as well, but want that preservation to occur through active language use and intergenerational dissemination of knowledge. Those communities are also interested in management of documentation that is aligned with their cultural and political values. While I acknowledge the finite scope of current archives and funding structures, I also recognize ample interest for consideration of new ideas and opportunities.

The next section further explores how the concept of Native self-determination can be misaligned with existing language archiving efforts. Better understanding of the relevance of self-determination creates a road map to develop initiatives with greater compatibility. In addition to self-determination, I also consider how related concepts of land tenure and educational dissemination impact decisions about participation in archiving initiatives.

3. Cultural archiving challenges: self-determination, land tenure, and educational dissemination Participation in language archiving projects can be challenging for Native American communities for a variety of reasons. Part of the difficulty stems from seemingly oppositional priorities held by archivists and Native American tribal groups. Generally, archival organizations and their funders seek both secure storage of documentation and access to content. Native American tribal groups also seek secure storage, but often appear to reject most public access to their cultural documentation. Predictably, this tension complicates collaboration efforts, funding proposals and limits tribal participation in archiving projects. I offer that tribal opposition

to public access of language documentation is actually quite nuanced. Defensive responses are more a symptom of too few content management control options and overarching needs for maintenance of self-determination. In actuality, most Native American groups want some public access to content, particularly for cultural resource management and educational efforts. These groups just want the security of determining those access restrictions themselves.

Self-determination is the legal and political basis for most rights uniquely sanctioned to Native Americans by federal and state governments. Self-determination is a recognition that Native American groups had sovereignty prior to European contact and that colonization did not fully extinguish those rights. Tribal self-determination is integral to the “nations within a nation” relationship, where tribes maintain government-to-government relations with the United States (Deloria 1984). There is also a holistic dimension to self-determination that is inclusive of cultural representation and transmission processes. As stated by Vine Deloria Jr. (1984:251), “language is the key to cultural survival and can not be considered in isolation; it is and must be the substance of self-determination.” Deloria’s epistemological framework situates language, including its documentation, as a relational and interdependent representation of culture. The concept of self-determination is useful for evaluation of language archiving impacts, outside of “isolation”. Affirmation of holistic tribal self-determination is also an important way for memory institutions to improve or decolonize historically disproportionate relationships with Native American communities. In this section I explore how tribal self-determination, land tenure and interests in educational dissemination impact decisions to participate in language archiving projects. Exploration of these factors provides context for low utilization of language archives by Native American groups and rationale for development of a value-added archive model.

3.1 Self-determination Tribal self-determination represents official federal policy since the 1970s and promotes “tribal self-government and Indian control over the lives of Indian people” (Echo-Hawk 2013:184). While Native American tribes are diverse, one commonality they all share is a political relationship with the federal government. The political relationship between tribes and their colonizer is highly complex, and greatly differentiated for federally and non-federally recognized tribes. Federal recognition formalizes the government-to-government relationship between a tribe and the federal government. Recognition also sanctions tribal self-governance of people, resources and territory. For example, most federally recognized tribes, have defined territory where they are able to regulate practices, such as resource harvesting, casino operation and tribal court administration. Federal recognition is not necessarily an indication of indigeneity, cultural alterity or cohesive tribal identity, however tribal self-determination is marginalized without federal recognition. For both recognized and non-recognized tribes, political and cultural self-determination is a unifying concept with broad importance.

Tribal self-determination represents a hard won victory for Native Americans following decades of federal Indian policy characterized by forced termination and as-

similation. Between 1953 and 1964, more than 100 Native American Nations representing over 12,000 people, lost federal recognition (Wilkins and Stark 2010). Those tribes lost ability for self-governance and access to federal programs for health care, housing, education and more. During this era 2,500,000 acres of Native American territory was also sold, mostly to non-Natives. According to Deloria (1998:26), “Self-Determination, not Termination” was a slogan employed in the late 1960s as Native American people struggled to force the federal government to abide by treaties, recognize tribal resource rights and reverse termination policies. The Indian Termination Era ended over 40 years ago, but tribes are keenly aware that no guarantee exists that such policies will not return.

The United States Congress retains unilateral authority to alter and abrogate Native American treaties and tribal recognition. Accordingly, many tribes are wary of situations where their capacity for self-determination is limited or undermined. Speaking of Indigenous people, Linda Tuhiwai Smith (1999:1) states, “It angers us when practices linked to the last century and the centuries before that, are still employed to deny the validity of indigenous peoples’ claim to existence, to land and territories, to the right of self-determination, to the survival of our languages...” Native American tribes maintain federal recognition through active demonstration of tribal authority and cultural alterity (Sider 1993; Dombrowski 2001). Rights that are actively used are harder to take away, just as it is easier to question someone’s heritage if they do not exhibit recognizable cultural traits. Demonstration and management of identifiable cultural practices, like language, demonstrates both political and cultural self-determination. A system that creates normative expectations of cultural identification, especially when those are tied to economic and political opportunity, has fundamental injustices. But lack of justice has been a constant aspect of the colonial experience for Native Americans. Greater participation in archiving management rebalances some of the historical exclusion Native Americans have experienced around cultural heritage representation and curation.

According to historian William Hagan (1978:135), “to be an Indian is having non-Indians control the documents from which other non-Indians write their version of your history.” Hagan goes on to say that Native Americans are held ‘captive of the archive’ because neither archived resources, nor the archive itself, is in their control (138). Since the time Hagan wrote, a dramatic increase in language documentation has occurred; however, capacity to make decisions about the access, use and dissemination of language documentation continues to be a challenge for tribes. Central to conceptualization of self-determination is the ability to *determine* what is most appropriate for the political, legal and cultural needs of Native American people. Without that decision making ability, tribal self-determination is conceptually (if not directly) degraded. The ‘archive captive’ narrative identified by Hagan has continued relevance today and provides opportunity to consider ways of bringing a decolonizing lens to memory institutions.

Tribal management of documentation collections is a major step in the right direction toward aligning needs to affirm self-determination with goals of secure documentation storage. Such functionality is directly aligned with current tribal pri-

orities and reverses the “captive” narrative. While all the major international language archive platforms already allow some degree of access control, Mukurtu CMS is unique. Mukurtu CMS delivers the “fine-grained” access and use controls that most tribes are looking for, including cultural protocol management and intellectual property licensing (Christen 2012). Given Mukurtu’s many strengths, the platform could benefit from more optimization specific to audio/video based language archiving and enhanced educational dissemination capabilities (Shepard 2014). That said, Mukurtu’s design delivers much needed tribal management capacity and makes for an excellent foundation to build upon. The value-added archive concept would provide additional features and services to support tribal interests and utilization.

3.1.1 Value-added solutions: self-determination Native American tribes are highly diverse and have varied needs or expectations for language archiving. Simply providing an archive management platform may not be sufficient to ensure effective utilization by tribal communities, given that technological, staffing and financial challenges exist for many Native American tribes. A value-added archive could provide a number of support services to increase and improve utilization. As the before mentioned Vine Deloria quote states, language is not an isolated or abstract aspect of culture. Accordingly, value-added archiving should also include tools and features that enable holistic utilization of documentation resources. Centralized management, language policy support and capacity building are three examples of how a value-added archive could support holistic tribal self-determination.

The large international archives have already proven the value of centralized management of server operations, software development and technical support. Lack of centralized archive management is a key factor making the community-based archive model questionably sustainable and scalable. If each tribal community hosts their own server, or even contracts their own cloud based archive environment, there are clear inefficiencies. Hosting of individualized language archives domains from a central location seems to address tribal interests in autonomy while being mindful of efficient resource pooling. Individualized domain hosting should come complete with centralized services like technical support, software maintenance and ongoing platform development. However, centralized hosting should only be the first step if supporting self-determination is a goal.

A value-added archive should provide wrap around services that enable tribes to determine best applications for their documentation resources. Language revitalization is a goal for many Native language communities and a value-added archive can provide needed support for these efforts. Effective language policy is a recognized aspect of comprehensive language sustainability efforts. The UNESCO *Language Vitality and Endangerment* report identifies the importance of language policy planning in its language vitality assessment criteria (UNESCO 2003). Language documentation and revitalization are relevant to diverse aspects of tribal governance including education, health, politics, law and natural resource management. Accordingly, comprehensive language policy planning is needed to coordinate efforts and identify strategic trajectories that may intersect with archiving processes. Management of

documentation resources in an archive requires a tribe to consider questions around access, protocol, orthography and educational application. Even the best intentioned project can be quickly derailed by lack of consultation between tribal agencies. For example, if a community has multiple orthographies in use, decisions about writing system use become imperative for participation in an archiving project. Some planning decisions will be necessary to alleviate concerns about how and why a particular orthography is used. In other tribes, documentation resources may pertain to multiple dialects and speaker communities. Language policy planning could help coordinate access across multiple user groups. Effective language policy planning likely requires consultation from experts in linguistics, tribal governance and education. This suite of personnel expertise may not exist within tribal government operations, but would make for an exciting cross-discipline service of a value-added archive. In supporting self-determination, a value-added archive can achieve greater use, acceptance and sustainability.

I have shared the value-added archive concept with numerous Native colleagues and received valuable feedback. In particular, some have stressed that a project of this nature should both highlight the contributions and expertise that Native professionals can offer, and create educational opportunities to build capacity. Whenever possible, hiring and contracting with Native linguists, curriculum developers and other professionals helps develop project accountability. Ensuring Native professional involvement can increase cultural compatibility, strengthen tribal partnerships and model decolonizing values. Value-added archiving can also provide opportunities for increasing skills, experience and knowledge. Language archiving projects, especially holistically envisioned ones, require extensive database entry, cultural annotation, transcription, audio filtering and more. These tasks are excellent entry points for mentoring and internships. Projects that prioritize increasing local skills and experience help offset tendencies toward over reliance on outside experts. As noted by Echo-Hawk, the essence of self-determination is both the people and capacity for effective decision making.

Tribal self-determination is as much of an epistemological framework as a concrete action. Liana Charley John, Director of the C'ek'aedi Hwnax (Ahtna) language and cultural archive in Alaska, describes documentation resources by stating, "these are our people, our own ancestors and it is very much a part of our sovereignty. It's our right to own our knowledge and to say how it can be used and shared" (p.c. February 27, 2014). Affirmation of self-determination creates a macro level standard for projects like language archiving. If activities are recognized as being aligned with that standard, then their potential for success is greatly improved. Numerous practical functions of tribal governance derive from self-determination; one is land tenure. Next I describe how land tenure is an important concept for Native American tribes and ways that its maintenance is complicated by language archiving. I also identify ways a value-added archive can empower tribal land tenure capacity.

3.2 Land Tenure Capacity to determine use and ownership of land and resources is a process described as land tenure (Churchill 1992). For tribes located near water,

the term land tenure also has direct applicability to marine, intertidal and fresh water territories. Maintenance of tribal land tenure is a complicated process; reservation boundaries may have changed multiple times, communities were forcibly relocated, and tribally important resources (spiritual, subsistence, archaeological) often exist outside reservation boundaries. Furthermore, some tribes have no tribally controlled lands and others only control a fraction of their traditional territories. Whether a community is looking to regain land ownership, manage recreational use of a sacred site or maintain ability to harvest salmon, a tribe's ability to prove their connection to that land is critical. Language and other cultural documentation is used for a variety of land tenure maintenance purposes. According Liana Charley John, materials in the C'ek'aedi Hwnax archive have direct application to land tenure claims. She states, "there have been a lot of legal battles around traditional resource use. We have specific recordings from the 1970s that describe traditional resource use and territory and I can see potential for using this [documentation] to support our claims" (p.c. February 27, 2014). Most knowledge, including that related to land tenure, was orally held prior to colonization for the Ahtna and other North American Native societies.

Native American oral traditions are highly diverse, but will often contain descriptions of territorial boundaries, resource use practices, and descriptions of land tenure arrangements (Dinwoodie 1998). Land tenure accounts may be plainly stated, like "our shellfish harvesting grounds extended from X location to X location in 1825." They also may be more circumstantial, with comments describing resource harvesting or cultural practices in certain locations and times. As language endangerment has reduced the number of fluent speakers in many Native American communities, legacy documentation of oral tradition knowledge plays an increasingly important role in land tenure maintenance. Bell et al. (2013:3) describe how Native "communities have been using, and continue to use visual media to assert their sovereignty, challenge the terms and nature of representation, and create new intercultural dynamics." Media in many forms provides consequential evidence for tribes in asserting land tenure claims. Tribal archivist Dave Warren (1984), provides an example of how visual media resources in an archive can contain information that is used as legal evidence. Photographs of cultural activities like harvesting or farming may contain "critical, albeit subtle information" showing use of resources or territory (vii). This contextual information can, for example, "spell the difference in legal arguments over water rights." Equal or greater conclusions could be drawn from an audio recording, given that spoken words are often more descriptive and specific than an image. As tribes advocate for their land and resource rights, their ability to prove ownership is critical.

Claims to land tenure are typically mediated by court systems, because they involve complex assessments of territorial ownership over both time and changing legal contexts. In land claims court cases, tribes will likely have to prove some form of their nature of attachment to a place or resource. Nature of attachment is a legal test used to determine the validity of Native land tenure claims (see Roth 2002:154-156; Miller 2011:109-113). For a tribe to prove their nature of attachment in court, they must demonstrate a contiguous relationship with a place throughout pre-historical, historical and contemporary eras. Text based documentation may be scarce or reflect

bias of colonial authors like explorers, government officials or missionaries. Accordingly, language documentation can be one of the only sources of evidence tribes have to demonstrate attachment in a culturally appropriate manner. Prior to writing, Native American cultures preserved oral histories through collective group processes (Cruikshank 2005). To most courts of law, the legitimacy of oral tradition evidence increases, simply by recording it and archiving it in a secure location (Birrell 2015). If a piece of evidence is housed in an archive, it can be described, contextualized and vetted by other experts. Such functionality in an archive would align with tribal cultural practices and the preferences courts have for legal evidence.

As stated by legal scholar Kathleen Birrell (2015:232), “if language and culture can be reconstructed from documentation then so can legal nature of attachment.” Especially in absence of written records, the “authenticity” of land tenure efforts are directly assessed by courts and government agencies in relation to available sources of documentation (Birrell 2010:81). In those instances, a tribe’s ability to store, manage and describe documentation becomes critical. Again drawing from his *Archive Captive* text, Hagan (1978) identifies risks U.S. tribes face if they do not control use of and access to archival resources. He states,

For the Native American this is more than just some intellectual game. What is at stake for the Indian is his historical identity, and all that can mean for self-image and psychological well-being. At stake also is the very existence of tribes, and the validity of their claims to millions of acres of land and to compensation for injustices suffered in earlier transactions with the federal and state governments (139).

Hagan articulates specific concerns about control of archival resources and their implications for identity, land tenure and recognition. Critical and cautionary guidance from scholars like Hagan highlights the holistic nature of language documentation and its potential for misuse. Accordingly, tribal interest in management of language documentation resources in an archive is expected. Storage and management of resources in one location addresses part of the problem for tribes. However, application and analysis of those resources is aided by tools and services a value-added archive can provide. Cultural resource management and lexical database functionality are two examples of features a value-added archive can make available to support tribal land tenure interests.

3.2.1 Value-added solutions: land tenure Cultural resource management (CRM) is a broad field that involves the preservation of tangible and intangible products of human culture. Tribal CRM refers to the management and protection of artifacts, archaeological sites and human remains—both on and off reservations (Guilliford 1992). Management of culturally sensitive sites may involve attempts to gain varying degrees of land tenure recognition as part of resource preservation strategies. Many tribes have Tribal Historical Preservation Officers (THPO) responsible for working with private land owners and government agencies to achieve preservation solutions.

THPOs catalog culturally relevant sites, describe their significance, reference supporting evidence and identify preservation plans. If a proposed development project is likely to impact a culturally sensitive site, the THPO will rely on its sources of documentation to determine appropriate permits, mediation and/or restrictions. CRM from a tribal perspective, integrates holistic management practices, including use of language documentation to support claims. According to a National Parks Service (NPS) report, tribal preservation interests include “not only historic properties, but languages, traditions and lifeways” (Parker 1990:i). Overlapping CRM and language maintenance needs provide rationale for shared functionality of preservation technologies.

There are many similarities between CRM and language documentation efforts. Both fields involve the preservation of valuable products of human culture. Both fields also must balance tribal interests in self-determination and land tenure, with available resources. In particular, THPOs and tribal language departments also both struggle with culturally appropriate technology to store, describe and apply documentation (Ridington 2016). In describing tribal CRM needs, the NPS report states, “the key issue [for tribes] is control. Indian people want to control the access to and study of their cultural resources, whether these are aspects of their living societies, archaeological sites, or collections of artifacts and objects” (Parker 1990:ii). Tribes struggle with both CRM and language archiving technologies because of similar issues of data control, access, application and dissemination. Integration of CRM database functionality into a language archive could facilitate demonstration of holistic connections between material culture evidence, oral tradition and place-based resource preservation. CRM integration would also allow tribes to catalog culturally significant resources and supporting evidence in one compatible digital environment.

Tribes have an immediate and growing need for integration of technology that supports CRM efforts. Population and resource access pressures are placing increased demands on land use, that will only become more pronounced. As a result, tribes are increasingly engaged in high profile applications of their treaty rights and land use boundaries to limit development they see as detrimental. Ongoing efforts to block the Dakota Access and Trans-Mountain Pipelines are two prominent examples. Tribal CRM needs will increase as climate change creates new management requirements and heightens scrutiny of environmental impacts from development. Integration of CRM tools in an archive increases holistic use and application of documentation resources in ways that support self-determination. Lexical database integration is another feature that value-added archives could offer to support land tenure management.

Lexical databases provide structure for describing the lexemes of a language. Use of a lexical database requires ability to manage written and audio/video documentation data resources in one place—just like CRM. Entries in a lexical database describe part of speech designation, provide a definition, simple sentence examples, cultural annotations and information on relationships to other entries (Loos et al. 2003). Lexical database software enables research, ongoing documentation and production of materials like dictionaries or grammars. Robust lexical database use can actively

support CRM and related land tenure initiatives, along with language revitalization efforts. Effective lexical database use increases the quality and utility of language documentation data. With better data and integration, tribes have more opportunities to apply resources as they find appropriate. Lexical and CRM database software both enable tribes to take management responsibility for documentation materials and their application. These database tools have similar needs for descriptive metadata fields, source documentation linking and permission control requirements. Integration of these software tools into the suite of services provided by an archive dramatically increases the utility and applicability of documentation resources. Tools like CRM and lexical database integration likely require support services from technical and academic personnel, like linguists and anthropologists. Availability of these services may require fee-for-use and grant writing service arrangements to make them financially viable. However, the opportunity for an educational institution to provide cross-discipline support in collaboration with tribal communities has exciting potential. As previously described, these initiatives should encourage meaningful tribal contributions and build capacity for Native people to showcase their expertise and skills.

Tribal self-determination is actualized in political and legal contexts, such as ongoing land tenure efforts. On the cultural side, tribes demonstrate self-determination through influence over cultural practices, like language use and dissemination. Native Americans are acutely aware of the importance of cultural self-determination, because their colonizer has defined them through books, film, fashion and television for centuries (Huhndorf 2001). In addition to unwanted and often inaccurate representation in media, Native American identity is also co-opted, assumed and exploited in practices like ethnogenesis and cultural appropriation. Tribes may not be able to influence names and mascots of major sports teams or their depiction in Hollywood movies, but they do have some control over tribally managed education. What students learn, how they are educated and by whom, are important choices in any culture and reflect that culture's values. Since language is a particularly salient and identifiable aspect of culture, Native language education is of particular significance to tribes. While many tribes have some control of Native language education, their efforts are hampered by lack of effective tools and resources, particularly in relation to applying documentation, supporting ongoing documentation and recontextualizing modern relevance of legacy resources. Tribal language dissemination needs and opportunities for support from a value-added archive are considered next.

3.3 Educational dissemination For those Native American communities that I collaborate with, educational dissemination of archive resources is a consistently articulated unmet need. Application of language documentation for educational purposes puts tribal interests in self-determination directly into practice. Educational application of legacy documentation occurs through listening to recordings, viewing textual documentation and engaging in research with such materials. Other examples include embedding audio recordings into online curriculum and metadata enrichment projects. There is likely little disagreement that application of documentation for

educational purposes is valuable and should be encouraged. However, neither large modern archives nor those community-based examples effectively accomplish this goal (Shepard 2015). Given limited time and funding, there is not even consensus that archives should directly engage in educational efforts at all. I offer that greater educational engagement, on the part of archives, is a powerful opportunity to assist tribes with a principle aspect of articulating their self-determination and cultural sustainability. Given the ongoing state of Native language endangerment, this functionality is acutely needed.

The majority of Native American languages are no longer passed down through in-home, intergenerational language dissemination practices (Bokamba 2008). Accordingly, tribes interested in language revitalization efforts must engage in coordinated efforts to teach their languages through community, school-based and in-home education. Lack of curriculum resources, trained language teachers and funding are challenges common to most Native language education efforts. Dissemination of multimedia rich curriculum, through pedagogically effective methods is an extra complication, but one distinctly imperative for language education. Language documentation is important to tribes for a range of holistic applications, including education. However, that access is complicated by overarching priorities for self-determination maintenance.

Incorporating educational dissemination capacity into language archives substantially broadens their scope of services. It will take work, but is aligned with expectations Native people have for application of documentation resources. I asked Edward Alexander, Director of the Dinjii Zhuh K'yaa community-based archive in the Gwich'in (AK) community, about development of their archive. I specifically wanted to know if their archive plays a role in maintenance of self-determination and education. He said, "To us the digital archive itself is meaningless—it could be stored in the root of a tree in the forest for all I care. Our digital archives are only useful if they enable us to have actual connections between actual people conversing and sharing" (p.c. February 14, 2014). This statement summarizes a common sentiment I hear while working with Native American people: a principle role of language archiving should center around educational dissemination. If archives are not directly engaged in education, a critical aspect of what gives their stored resources meaning is missing. Without educational dissemination, archives are overlooking an opportunity to support cultural self-determination capacity.

The gap between functionality desired by tribal communities is evident in how the concept 'language preservation' is understood. In my conversations with Native American people, the term 'language preservation' is often used to describe interests in reversing language shift through education (Fishman 1991). To many Native American people, language preservation is best achieved through active language use by young people. Archivists generally share this goal, but in their profession 'language preservation' is a distinct reference to the maintenance and access of the data bit stream and interoperability (Trilsbeek & Wittenburg 2006). The difference contextualizes an important distinction in ideology and functionality.

For many tribes, the opportunity to provide language education to current generations represents their best chance at language sustainability or revitalization. Engagement with language documentation is a meaningful part of that struggle. As in the case of most Pacific Northwest tribes, if educational efforts are not successful with current generations, then tribes will have to undertake the far more challenging task of language reclamation (Leonard 2012). Finally, educational dissemination actualizes the very reason documentation efforts were undertaken by past generations. Native elders who served as linguistic consultants, likely did so to ensure their knowledge was passed down. In situations where direct intergenerational language transmission is not happening, application of documentation resources can bridge that gap. Describing the role of elder's knowledge, Native scholar Lorie Roy states, "before education as we know it today came, it's the elders...They start you off at birth, and they continue on, and then you take over" (Roy 2011:157). Non-Native documentarians likely shared this goal of cultural transmission, even if they did not know who would make use of their documentation efforts. Cultural self-determination is brought full circle by teaching new generations with the knowledge preserved by past generations. Features and services of a value-added archive have much to offer the complex and resource intensive process of educational dissemination.

3.3.1 Value added solutions: educational dissemination Several factors limit application of existing documentation for educational purposes. First, if tribes want to make documentation available educationally, they need capacity to manage access accordingly. This issue and its relevance to self-determination has already been covered, and we will assume that any value-added archive will enable detailed use restrictions. Second, language documentation materials found in archives are often ill suited for educational use, compounding the challenge of application (Huvila 2008; Mosel 2012; Holton 2014). Audio/video legacy documentation may include unedited vocabulary elicitation and highly technical linguistic research materials. While there is valuable information here, the resource may require editing and deciphering to make it ready for student use. Audio filtering or enhancing may also be necessary given that many documentation resources have been migrated through multiple media formats. A value-added archive could provide audio technology tools and support to increase the quality and usability of that documentation. Linguistic support is also vital, as the technical nature of much documentation makes its use challenging. A third factor is media streaming. If documentation is edited and deciphered for usability, it will still need to be streamed to school and home based students. Building unique infrastructure to stream media is redundant if that capacity already exists in an archive and is dependent on access restrictions.

An archive that allows tribes to stream audio, video and text documentation while managing access is the first step toward effective dissemination. Next steps include development of curriculum authoring tools that enable production of media rich educational materials. Language learners are of all ages and skill levels. Educational materials should be differentiated based on age, skill, technology literacy level and Internet availability. One community may find that development of a multimedia re-

source using archived audio files is most applicable. Another community may want audio enabled, clickable word lists to accompany printed curriculum. For another group, development of online education style courses, complete with assessments, instructional content and student interaction may be most applicable. Still other groups may want to produce Quick Response (QR) codes to use for experiential, place based education. Creating engagement with past documentation is an important learning strategy and provides opportunity to enhance legacy collections.

While much of this section has focused on the need to support dissemination of resources, there are also important benefits to developing ways that users can produce and contribute content to an archive. Barbara Meek (2007) identifies how Kaska (BC) youth are primarily exposed to their Native language through hearing elders speak or by listening to “scratchy” old recordings. Over time, youth only associate being a speaker of Kaska with elder status or those ancestors captured on tape. Development of processes where new generations can interact with content that reflects their identity, not just that of older generations, has value. There is also opportunity to enable language learners to repurpose archive materials in novel ways. Kate Hennessy describes creation of new cultural documentation resources, based on legacy ones, with the term *resignification*. She states that reciprocal archive use and contribution keeps “media circulating in culturally appropriate ways” (Hennessy 2010:1–3). Attributing current meaning to documentation allows resignification of how the community understands an item, its value and use. Features like direct audio/video recording, social networking integration and mobile device compatibility support diverse content engagement. These features and more should be part of a value-added archive.

As in other sections, support services bring cross-discipline expertise needed for success. Creating effective educational curriculum in any institution requires a number of specific skill sets, though language education has some unique needs. Tribal members should directly provide this support whenever possible, in addition to having opportunities for capacity building. Linguistic support is again needed to help decipher existing documentation and accurately develop teaching resources. Curriculum development professionals, along with media specialists, instructional designers and anthropologists will help facilitate pedagogically, andragogically, and culturally appropriate curriculum. Provision of such depth and breadth of support services is ambitious, but most universities easily have all these professionals in their ranks. Lastly, if we are to make meaningful progress toward reversing trends toward Native and minority language obsolescence, then ambitious projects are exactly what is needed.

4. Conclusions No one solution will solve the crisis of Native and minority language loss, the factors are too diverse and structural. However, there appears to be broad agreement that:

- Current language archive projects are primarily used by archivists and academics.

- Small and large collections of documentation exist for many endangered languages, but often lack effective utilization by language origin communities.
- For a variety of reasons, some Native American communities avoid participation in language archiving initiatives.
- Native American communities have growing interest in management of cultural resources, including language documentation.
- Native American language communities would benefit from more tools to manage their own language documentation processes in accordance with political and cultural self-determination maintenance.
- Native American language communities would benefit from more tools to facilitate dissemination of documentation for pedagogically and culturally appropriate education. There is opportunity and need for innovation and experimentation in language archiving.

Through consultation with tribal partners from around North America I find there exists a clear and unmet need for new approaches to Native language archiving and dissemination. Various tribes are trying to develop aspects of the value-added archive described here, which demonstrates interest. However, lack of centralized archival and dissemination services that are designed for Native language communities results in duplicative efforts. A value-added archive could deliver a suite of wrap around features and services supportive of tribal self-determination, including:

- Intuitive, user-centered design to support utilization and management by tribal groups,
- Centralized linguistic, media management, curriculum design, grant writing and language policy planning services,
- Cultural protocol access restrictions and intellectual property licensing,
- Centralized technical administration and support,
- Cultural resource management and lexical database features,
- Rich support for culturally appropriate educational dissemination,
- Mobile device application support and compatibility,
- Direct audio/video language recording capability,
- Social, collaborative and interactive design for media use and generation.

The value added archive concept proposed here is not without its challenges, especially given continued processes of language endangerment. However, methodologies that support user engagement and diminish ‘data cemetery’ effects deserve further investigation. A data cemetery, as described by Widlok (2013:185) occurs when digital

data is stored, but has low utility due to its access limitations or the design of the storage repository. There is no shortage of well intentioned, but under used Internet resource sites and information repositories. The holistic services and support envisioned here will hopefully avoid such digital graveyard effects. Funding for project infrastructure and support services is an obstacle, but the project makes for an excellent university partnership. Such a project can achieve some financial sustainability through fee-for-service revenue generation. There would also be value in providing grant writing support to connect funders and tribal communities with the archive's services.

When I sit down to record oral tradition or linguistic knowledge with Native people, I have a clear understanding that our work is not intended for my benefit. Yes, I may conduct research, publish and aid the community through what I learn—however I am not the intended recipient. Those tribal partners I work with are making an investment in dissemination to future generations, who they expect will have greater ability learn, use and pass on this knowledge themselves. Those tribal partners are also investing their time to ensure that their knowledge will aid community efforts to affirm self-determination, land-tenure and culturally appropriate education. I have to assume that past linguistic consultants, sitting with prior documentarians, had similar interests as well.

In my experience, Native people conceptualize their capacity for self-determination broadly, particularly since it has been so severely limited in the past. If we have learned anything from the past 25 years of work toward reversing Native and minority language endangerment, it is that a diverse toolkit of approaches, resources and methods are required. No one technique or technology fits the needs of every group and outside experts are never going to solve language endangerment themselves. Empowering Native language communities to manage efforts themselves is an integral part of the equation. This critique of the design and functionality of existing archive models intends to continue dialogue on the need for comprehensive archiving and dissemination solutions that meet the needs of Native language communities. Facilitation of Native language sustainability is improved by innovative application of current technology to enable productive use of past documentation. Increasing cultural compatibility of these efforts adds value to language archiving efforts.

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