

Language Perseverance and Translation of Cherokee Documents

Ellen Cushman

When I speak of orientations, let us be clear from the outset that I am presuming a standpoint east of the Roman Empire. To *orient*, as decolonial scholar Rocío Quispe-Agnoli reminds, is to begin from the locus of the Roman Empire, the seat of the Western epistemic, and to look toward the *Orient*, a word that, according to the *Oxford English Dictionary*, was “originally used with reference to countries lying immediately to the east of the Mediterranean or Southern Europe (i.e. east of the Roman Empire).”

To say that this special issue presents reorientations to the text, then, shifts the direction of gaze on textual production and consumption but still presumes a Western interpretive standpoint. In this article I describe a digital archive project that must necessarily *de-orient* from the Western epistemic standpoint to view indigenous language manuscripts from positions original to and still unfolding in the Americas. Doing so, the digital archiving project I describe will extend and build upon the reading, writing, and teaching practices with texts written or spoken in indigenous languages in an effort to develop collective and shared practices *with the text* as technology useful for sustaining peoples’ understandings of themselves in and on their own terms.¹

As part of my consulting work with the Cherokee Nation Johnson O’Malley (JOM) Program between 2010 and 2012, I was asked to organize a team of Cherokee scholars (Tom Holm, Leslie Hannah, Kathryn England and Chris Teuton) to help develop a curriculum based on the teachings of a selection of

Ellen Cushman is citizen of the Cherokee Nation, Dean’s Professor of Civic Sustainability, and Associate Dean of Academic Affairs, Diversity, and Inclusion in the College of Social Sciences and Humanities at Northeastern University. Her decolonial scholarship has recently appeared in *Community Literacy Journal*, *Rhetoric Review*, and *The Journal of Writing Assessment*. She has also completed work on two coedited collections: *Landmark Essays: Rhetorics of Difference* with Damián Baca and Jonathan Osborne (Routledge) and *Literacies: A Critical Sourcebook* with Christina Haas and Mike Rose (Macmillan).

the Cherokee wampum belts. When one of the wampum belts was unethically obtained by a national museum, our elders decided to stop reading them at stomp grounds and have since kept them in secret locations. The Cherokee Nation thought it was important to continue these teachings. In helping to write the curriculum, I understood the activist work necessary in telling stories as a central facet of persevering in indigenous languages. Regardless of the material artifacts that prompt stories, be they wampum belts, manuscripts in digital archives, or social networking sites, decolonizing the archive begins with attention to the ways in which archives were imperialist creations to begin with. As soon as the word archive is used, it evokes four imperialist tenets of thought: Tradition. Collection. Artifacts. Preservation. These tenets of imperialist thought structure archives whether in material or digital forms. I took up these ideas in a 2013 special issue of *College English*, guest edited by Jessica Enoch and David Gold. This special issue focused on the digital humanities in an “effort to help develop understandings of ‘digital historiography,’” more specifically, “to draw attention to a different kind of digital practice: the work of *building* digital historiographical projects ourselves” (108).

This idea of tradition, as a singularized concept, was created under the framing narrative of linear time. In other words, Western thinking created its own singular tradition by pointing to itself along a timeline hatch-marked within and against a plurality of traditions. Often organized by Western notions of time, archives and museums train their visitors to be epistemologically obedient to Western modernity’s concept of tradition. If the first move in decolonizing the archive is to challenge Western understandings of time as a necessary underpinning for tradition, the second move takes up the problem of collecting artifacts. The actions involved in the collection of artifacts and texts damage them in three ways: (1) the item is taken from its context of use; (2) it is no longer understood in relation to the stories that place the item in its context and in relation to the people who use it; and (3) the people who would ostensibly have uses for the item are necessarily presumed to be no longer living. The third move in decolonizing the archive emerges directly from the second when trying to understand how these “artifacts” or texts work to mediate knowledge for the people who use them. What does this text mean to the people who integrate it into their reading and writing practices? Even though it seems a collector has succeeded in obtaining a Cherokee wampum belt, that person is not likely to know how to read it, how it works, or what it *means*. Because they are lived, spoken, read, enacted, and taught, and because they provide a history or way to look toward, the Cherokee wampum belts represent our continued survival as a tribe. The meaning of these belts is both symbolic as highly valued pedagogical text and as mnemonic device that prompts the recall and telling of stories as enuncia-

tion of knowledge. This brings me to the fourth and final move that would be necessary to decolonize the digital archive: indigenous languages and decolonial translation methods. The language used to tell the stories in archives matters a great deal because English has been key to establishing Western thinking and histories. Those of us interested in building decolonial digital archives ask: How can digital libraries, scholars, and indigenous communities advance a decolonial vision of society—a vision that begins with the epistemologies of peoples and that features story, place, meaning, and perseverance?

Initial efforts to digitize collections of documents written in indigenous languages by archivists and librarians working from imperial textual orientations have occasioned a number of challenges from indigenous scholars and community members. Though certainly well intentioned, these initial efforts may have taken it for granted that the peoples represented in these documents would be comfortable with the material and content being made publicly available. Architects of these early digital archives may have been a tad optimistic about the usefulness their archives would have for potential visitors and native peoples. The design features of these archives may not have been created in light of the purpose and exigence of community members who have reason to continue to interact with and use these documents for purposes of their own making. Taken together these challenges and more have led to suggestions for efforts to decolonize digital archives and museums (Lonetree; Rivard; O’Neal).

Happily, recent efforts to decolonize archives have advanced the creation of protocols for working with communities to identify culturally sensitive materials and to select metadata categories for these materials.² A next step in decolonizing the archive begins with designing user interfaces and computational infrastructures for translating indigenous language manuscripts with community members’ needs, audiences, and purposes considered throughout the process. Our team is in the process of prototyping a digital archive that features a community-driven design process and a decolonial translation process of Cherokee language documents. The Digital Archive of American Indian Language Preservation and Perseverance (DAILP) strives to respect the epistemic potentials of story, to recuperate knowledge, and to extend existing indigenous language lexicons—all in an effort to forward both Cherokee language preservation and perseverance efforts. As such, creating a community-based digital archive with decolonial translation processes helps to ensure the ongoing creation of indigenous peoples’ knowledges, interpretations, and representations of the past. I imagine this digital archive as a space where interactions with texts are central to the archive from its very inception—for using digital technology to not only bring together texts from geographically dispersed archives, but also for recreating spaces where peoples can interact with indigenous language texts to support their ongoing

language practices and cultural perseverance. Digital archives hold the promise of allowing those using them to de-orient from Western epistemics by practicing together a re-placing of these texts into and on the terms of these indigenous language documents.

The decolonial digital archive I have in mind works in three ways: first, it will surface suppressed epistemologies, stories, and practices chronicled in the documents that were created by knowledge-holders of the Cherokee people, who recorded their day-to-day lives, histories, observations of plants and land, and various practices. Second, the archive promises to create connections across institutions, communities, and generations for the benefit of all, particularly as it gathers deep lexical knowledge of native speakers and linguists. Finally, the archive itself promises to offer a framework of tools, workflows, and data resources that will advance understandings of how complex architectures can be designed to ensure that the technical systems are flexibly structured to meet the needs, purposes, practices, and exigencies of the various users. The archive itself can be understood as a computational infrastructure, computer programming, written in code that enables and constrains the textual transactions around these manuscripts (Vee). The decolonial archive I have in mind is particularly timely.

The vitality of the Cherokee language, while comparatively strong among indigenous languages, has never been more precarious. As with most indigenous communities, Cherokees are experiencing a critical loss in the number of speakers in the adult generations to serve as “the middle ground between Elders, children, and youth within their communities” (Jenni et al. 1). Despite having a number of would-be learners, these same learners find few situations in which or reasons to practice the Cherokee language. Everyday language transactions in Cherokee are few and far between. Most learners are “laboring under conditions that are radically different from the majority of world language learners. . . defined. . . by shortages of materials, limited domains of use, few proficient speakers, and wide dialectal variation” as well as legacies of imperialism (King 1) In response, the three federally recognized Cherokee nations have developed programs that use digital tools to challenge some of these obstacles. Already, online learning communities are enabling Cherokee language learners to connect with one another and establish support systems that are rooted in everyday contexts, such as schools and bible study. Linguists working with the Cherokee Nation Foundation have also developed important digital resources including mobile apps, online dictionaries, and online tools to support reading comprehension. Unfortunately, these technologies may not have had the hoped-for far-reaching implications for reading and writing practices in the communities.

These initiatives demonstrate but do not fully realize the potential of digital tools to address the problems of critical mass and embedded, intergenerational language usage in supporting language perseverance. Current digitally based language revitalization efforts suffer from fragmented and piecemeal approaches (Asfahaan and Sundaram). While Cherokee can be accessed across social media platforms and has a plethora of language revitalization resources, Cherokee speakers and language learners still need a rhetorical situation in which to speak, read, and write: they need purposes, audiences, and exigence for their communicative transactions (King and Hermes). The contexts that language revitalization apps and social media outlets offer may not necessarily provide meaningful reasons for community members to gather together with and around a text in order to practice the language (perseverance) and/or to build lexical materials that may promote further language documentation and knowledge making with these texts (preservation). Efforts to build this archive seek to address the exigence of creating a digital platform where users and community members can come together to forward language perseverance and preservation as mutually sustaining activities.

While I'm interested in creating a digital platform that supports indigenous language learning and documentation efforts, I remain mindful of the need for everyone participating to engage in decolonial translation practices. Colonial translation practices locate knowledge, language, practices, and peoples into and on Western terms, as othered from a Western tradition they seek to inscribe (Mignolo; Díaz and Quispe-Agnoli; Price; Ramos, Daly, and Moraña). I recognize that language practices involved in translation have been a cornerstone of imperial and settler agendas throughout the world. In "Translation as Erasure: Thoughts on Modernity's Epistemic Violence," Rolando Vázquez rightly describes the creation of colonial difference through translation processes that simultaneously disdain and recognize indigenous peoples in order to establish epistemic borders. Translation has been a tool useful in creating the Imperial difference within difference. "Translation. . . produces strategies of containment. By employing certain modes of representing the other—which it thereby also brings into being—translation reinforces hegemonic versions of the colonized" (Niranjana 3). With Tejaswini Niranjana, representing the other was a method used to control subjects, to contain them within category systems, and to catalog their understandings as traditions against which a normative tradition might be defined. Decolonial translation has been described elsewhere as a method and methodology that seeks to reveal the gaps in knowing that were created by the colonial difference and to present the alternative, namely the conversion of understanding into and on indigenous peoples' terms.³ The decolonial translation supported through digital tools in DAILP builds upon recursive, reciprocal, and

iterative transactions as translators work together with a word or phrase in an indigenous language. In addition, by embedding translation within a language learning process, DAILP resituates translation at the service of language perseverance: the artifact it leaves behind is not a replacement or substitute for the original language, but a reinforcement and creative new rendition of it. In what follows, I describe the history and goals of this digital archive to set the stage for a discussion and illustration of the translation processes it seeks to make possible. I suggest that creating a community-based digital archive with decolonial translation processes helps to ensure the ongoing creation of indigenous peoples' knowledges, interpretations and representations of the past.

**DIGITAL ARCHIVE FOR AMERICAN INDIAN LANGUAGES
PRESERVATION AND PERSEVERANCE (DAILP)**

DAILP was originally conceptualized with the support of a 2014 IMLS SPARKS Ignition planning grant in which faculty, tribal representatives, and Cherokee and Ojibwe community members created and tested designs for an interface to facilitate the translation of Cherokee and Ojibwe manuscripts housed in archives and libraries around the country.⁴ The planning process, undertaken in collaboration with Gordon Henry and the support of a grant from the Institute of Library and Museum Services, laid a foundation of methods, design principles, desiderata, and relationships on which DAILP now builds. The design process yielded a decision tree for selecting manuscripts and determining their cultural sensitivity; a set of interface elements and an understanding of how navigational and organizational features affect usage by translators and language learners; and conclusions about methods for transcription and translation that can meet the needs of language learners, archivists, and scholars. The planning grant's joint focus on Cherokee and Ojibwe reflected the longer-term goal of including multiple language traditions in DAILP and demonstrated its feasibility; for this initial phase of the project, I focus on Cherokee.

In 2015, the team began prototyping an archive for indigenous language translations with a selection of Cherokee language documents. The prototyping process takes advantage of digital tools being developed in the library that support document transcription, editing, and publication (described in more detail later); for DAILP, these tools are being adapted to support translation, transliteration, and linguistic annotation as well, and to accommodate the specific needs of DAILP's community of users. At a deeper level, DAILP also takes advantage of the library's digital repository and its ability to house complex digitized materials in ways that respect concerns for cultural sensitivity as well as the need for longevity and sustainability in the data.

The creation of library-based digital infrastructure and a digital archive introduces a potential tension within the project between institutional motives of preservation, documentation, and study and cultural motives of supporting language learning and vitality. The term *language perseverance* expresses a focus on the practices of speakers, learners, and members of the culture in the continuing vitality of the language, while *language preservation* is aimed primarily at documentation and formal analysis (Cushman, *The Cherokee Syllabary*). For the team creating DAILP, it is crucial to establish not only an alliance between these two motives, but also a reversal of their typical relation. DAILP treats language perseverance and language preservation as closely interconnected and mutually sustaining efforts but also understands that significant institutional and financial power rests with the latter, requiring that deliberate and critical attention be paid to keeping the primary goal of perseverance at the center of the project's design.

The integration of language learning with the digital enhancement and dissemination of documentary materials is a comparatively new approach, although important related work does exist. Online lexicons for other native languages have been developed (e.g., the Ojibwe People's Dictionary at the University of Minnesota, the Online Omaha and Ponca Dictionary at the University of Nebraska-Lincoln) and provide insights and models in the application of these standards. Important online language learning resources have been developed by the Cherokee Language Consortium, the Cherokee Nation Foundation, and linguists working with the nation: these include digital tools such as online lexicons (the Cherokee-English Dictionary and Brad Montgomery-Anderson's Cherokee Electronic Dictionary) and the Cherokee Verb Builder project. The Cherokee Nation offers online tools, such as word lists, to support reading comprehension and online language learning communities. These efforts have also yielded important linguistic data upon which DAILP is building.

Cherokee language documents from archival collections are being digitally disseminated by the American Philosophical Society, the Museum of the Cherokee Indian, the Gilcrease Museum, the Beinecke Library, the Smithsonian Institution, the University of Tulsa, West Carolina University, and a handful of other institutions. In general, documents in these collections are discoverable through standard search interfaces and viewable using document viewers that present the materials artifactually rather than textually; no transcription or translation is available, and documents lack contextualization from a specifically Cherokee perspective. Exceptionally, Yale's Digital Humanities Laboratory has established a public transcription interface (Transcribe@Yale) through which materials from the Beinecke collections (including Cherokee language documents) can be either translated into English or transcribed into the Sequoyan syllabary to assist in making the documents searchable. A team from the United

Keetoowah Band of Cherokee Indians, led by Ernestine Berry (director of the John Hair Cultural Center & Museum), translated into English approximately seventy-five documents from this collection with the support of an Institute of Museum and Library Services Grant. This team has donated their translations to DAILP to support further annotation of these texts and has agreed to join DAILP in a consultancy capacity.

The core goals of DAILP are to

1. Develop an online environment for transcribing, translating, and contextualizing historical Cherokee language documents written in the Cherokee syllabary, designed and developed in partnership with the Cherokee language learning community, and drawing from archival sources.
2. Support sustainable programs of language learning that pair practices of transcription and translation with intergenerational language learning and mentoring.
3. Over time, build a large digital collection of Cherokee manuscript documents with transcriptions and translations that serve as a resource for language learning and for linguistic and historical research.
4. Develop a framework of linguistic and cultural tools and resources, including online lexicons, translator commentary, morphological analysis, and linguistic ontologies, that can enhance the value of the documentary collection for language learning as well as making comparisons across languages possible.

This initiative arises from and builds on work originating with Cherokee peoples themselves; it closely involves Cherokee peoples in its design and conduct; and its results will be theirs.⁵ Although the DAILP is hosted at Northeastern University, all aspects of this initiative take their motivation and momentum from the work already being done by the Cherokee Nation Foundation and The Cherokee Nation Education Services Group and will be developed in close collaboration with members of those groups. The translations that will be undertaken result from the collective effort of language learners, teachers, and translators; native community members; archivists and librarians; and transdisciplinary scholars with interests in indigenous peoples, cultures, histories, and languages. Broadly inclusive, the project aims to also be deeply reciprocal, with each member contributing to their own abilities to the interlinear translations. All coming to the site would be doing so to learn about Cherokee people and the language in and on Cherokee terms.

RECURSIVE, RECIPROCAL, AND ITERATIVE TRANSLATION PRACTICES

To accomplish these core project goals, DAILP is developing translation processes that will bring together language learners, linguists, and community-based

translation teams working together on manuscripts; the resulting translations will become part of a growing collection that in turn can be used for language and cultural study. In the first phase of the project, the team prepopulated this archive with lexical information drawn from established online lexicons and reference materials. In the next phase, we will build the user supports and interface for the translation activities, modeling them after the collective practices and needs of language learners, teachers, and translators; native community members; archivists and librarians; and transdisciplinary scholars with interests in indigenous peoples, cultures, histories, and languages. These translations will help make the original document collection more accessible to readers and language learners, while also further expanding the lexical dataset undergirding the site.

Aligning the transcription and translation of historical documents with a language learning process requires significant design attention to the kinds of information learners need, and how that information can support both the translation process and the learning process without hindering or limiting either one. As noted, the DAILP corpus and associated lexical resources will, over time, represent an enormously detailed body of knowledge about the Cherokee language, derived from both existing linguistic analysis and also from the evidence of historical documents. The challenge is to make this knowledge accessible as a support and a stimulus. Detailed interface planning will depend on intensive further work with language learners, however, our early design work focuses on ways of using contextual information about words and their meanings to support exploration of the historical document. For instance, when DAILP users have selected an image of a Cherokee language document to begin working with, they will be able to select a portion of the manuscript and see successively more detailed information: about an individual character, about the meaning of a word or its usage elsewhere in the collection, about an unusual spelling, and/or about more detailed linguistic information such as verb forms. In addition to these forms of support in understanding the language, the interface will also offer options to help generate transcriptions, translations, and analyses. The illustrations included here represent very early ideas that suggest the types of functionalities three of our intended user groups may expect to see and have requested be developed.

CHEROKEE LANGUAGE TRANSCRIPTIONS

The first moment of decolonial thinking made possible in DAILP begins with learning to unlearn the alphabetic bias (Baca; Baca and Villanueva; Ruiz and Baca). In other words, learning to decode, read, and write in the Cherokee syllabary is an initial break from the epistemic supremacy of the alphabetic lens—

the moment when a user no longer understands this as the letter “S” but as the syllable “du.” DAILP enables the transcription and related language discovery processes from a learner’s perspective. Entering a side-by-side image and transcription pane, users can select characters in the Cherokee manuscript page and transcribe these into the syllabary and transliterate them into the Roman alphabet in the adjacent pane. They could link annotations on distinctive spellings, link to explanations of usage and context, and identify particular character designs with a character picker. The character picker will be helpful when instances of a writer’s script are idiosyncratic to that writer and are distinct from among other samples of that same character as seen in other documents or in print (Figure 1).

CHEROKEE LANGUAGE TRANSLATIONS

The second moment of decolonizing textual transactions is to allow all users to discuss their work in mutually supportive ways that build upon each other’s collective efforts and knowledge. Importantly, the process of developing interlinear translations of these words is based on state-of-the-art translations developed in the seminal works of Cherokee linguist and Cherokee Nation Living Treasure Durbin Feeling, who most recently has worked with linguists William Pulte and Gregory Pulte on the book *Cherokee Narratives* that relies on interlinear translations (Figure 2), which privilege the syllabary first and foremost. The transcription and analysis process from a language expert’s/mentor’s perspective are enabled with lexical information provided by other learners, translators, and linguists whose work helps to prepopulate the lexical dataset of this site. Further translation is enabled through line-by-line transcription, autosuggestion of words (drawing from the online lexical dataset already ingested into DAILP), and annotation and discussion of queries and uncertainties. At any time, learners can link their transcriptions to discussions happening around these manuscripts by clicking a tab to see who has discussed or made notes about a word or phrase along the way.

CHEROKEE LANGUAGE ANALYSES

From a language learner’s perspective and from scholars’ or the public’s perspective (i.e., readers who are interested in Cherokee manuscripts but are not seeking to learn Cherokee), DAILP will link collaboratively authored explanations of word usage and context and will link annotations to other manuscripts where these words occur (Figure 3). Importantly, the site seeks to support digital scholarship and reading practices that give insight into Cherokee language, culture, and historical understandings. The manuscripts selected and supported

SITE TITLE HERE

Q*

User Name

LOGOUT

META DATA

TRANSLATION

DISCUSS

SOURCES

facsimile

transcription

[sc. R.əβ.β.β]

facsimile

transcription

facsimile

translation

2. OƏVLLƏDE RəββT

3. Rr ƏƏ \$6F i\$6'0-Tə0L EəƏFZV.VI AəəF E.I O'G.7E V.əGT

4. TLK4əV A.əəF E.I SUFZPƏDET D4Z L.əƏ ƏƏ ii Rr V.əƏ

5. ƏLƏ'ƏS\$ O'X.7Z O'SY DəəV 6L.71 FR ƏəƏƏ V.əƏ FR

6. ii DY.7R .əD GWYəV A.əəF DIFPFC V.ə CW.7.əDET

7. A.ə R.əβ O'PəƏIF.I Sh.7YB G.Ə ƏƏ O'G.7Ə Və'Y'əO

Figure 1: Cherokee language transcription: a possible syllabary character picker feature

1 DO-ᄁ USᄁ/IT 195 UET

2 OʇVILᄁE R.ᄁᄁT

3 RH ᄁE ᄁᄁP iᄁᄁʇʇ-TᄁLI EᄁᄁᄁZᄁV.J A.ᄁᄁP E.J ᄁᄁᄁᄁ V.ᄁᄁᄁᄁ

4 TLK4ᄁᄁ

TLK4ᄁᄁ
 Idajoseha
 lidajóseha
 lidii-ajooʔs-eh-a
 1PL.IN.A-be.troubled-PRS.IND
 we're having trouble

1. DO-ᄁ USᄁ/IT 195 UET

2. OʇVILᄁE R.ᄁᄁT

3. RH ᄁE ᄁᄁP iᄁᄁʇʇ-TᄁLI EᄁᄁᄁZᄁV.J A.ᄁᄁP E.J ᄁᄁᄁᄁ V.ᄁᄁᄁᄁ

4. TLK4ᄁᄁ A.ᄁᄁP E.J SᄁᄁZᄁᄁᄁᄁ D4Z LᄁᄁE ᄁE ii RH V.ᄁᄁᄁ

5. ᄁᄁᄁᄁᄁᄁ ᄁᄁᄁᄁᄁ ᄁᄁᄁᄁᄁ ᄁᄁᄁᄁᄁ ᄁᄁᄁᄁᄁ ᄁᄁᄁᄁᄁ ᄁᄁᄁᄁᄁ ᄁᄁᄁᄁᄁ

6. ii DY.NR .ᄁᄁ GWYᄁᄁ A.ᄁᄁP ᄁᄁᄁᄁᄁ V.ᄁᄁ ᄁᄁᄁᄁᄁ

7. A.ᄁ R.ᄁᄁ ᄁᄁᄁᄁᄁ. J ᄁᄁᄁᄁᄁ ᄁᄁᄁᄁᄁ ᄁᄁᄁᄁᄁ ᄁᄁᄁᄁᄁ

SITE TITLE HE

DASHBOARD

Letter to Doilie Duncas

facsimile

FIGURE 2. Cherokee language translation of a word selected by a user drawn from a collectively authored lexical dataset

The screenshot shows a web interface for a digital archive. At the top, there are navigation buttons: 'A', 'A', a search icon, and a plus sign. Below these are 'SITE TITLE HER...', 'DASHBOARD', and 'Letter to Dollye Duncar'. A 'facsimile' button is visible. On the right, there are 'User Name' and 'LOGOUT' links. Below these are 'DISCUSS' and 'SOURCES' buttons, followed by a 'translation' button. The main content area is split into two panes. The left pane shows a facsimile of a handwritten letter on aged paper. The right pane shows a transcription of the same text. A callout box with a pointer to the word 'dedalimohesgy?' in the transcription contains the following text: 'SILFZP'ODET: conversing (habitually), addressing each other [more detail] [look up this word] [see how this word is used]'. Below this, it says 'dedalimohesgy?' and '[click to see more]'. The transcription itself is as follows:

1. DO-3 USB'NT 195 UET
 2. O'OVLI'OE R.A'ST
 3. Rf OE \$6F i\$'0'7'0DI E'OPZV.I A.89F E.I O'G.7E V.8T
 4. TUK4' A.89F E.I S'UFZP'ODET D4Z L\$E OE ii Rf V.4E
 5. O'OP'OS\$ O'G.7Z O'SY DE'of BL'N3 FR O'OE V.4E FRT
 6. ii DY,LR .AD GWY'of A.89F DIL'of C V.4 CWJ.6DET
 7. A.8 R.8R O'P'ATP.I S'F. NYB G.\$ OE O'G.7E V'8Y.8

Figure 3: Cherokee language analyses: a possible explanation of a Cherokee word selected by a scholar using this archive to study this and other Cherokee manuscripts in which the selected word appears.

by this site will allow for differential levels of access to them, so that culturally sensitive materials remain in the hands of those predesignated by the nations who have provenance over these manuscripts. All of these interpretive processes will be supported by a decolonial digital structure and design process, following Jason Lewis, that seeks to create recursive, reciprocal, and iterative processes of working with these documents.

DECOLONIZING DIGITAL ARCHITECTURES TO SUPPORT ITERATIVE TRANSLATION PRACTICES

The challenges of decolonizing the digital architectures that underpin a project like this one—or even of conceptualizing such an undertaking—are both social and technical. The technical challenges are considerable. To a great extent, the power of current systems for digital publication and content creation lies in their reliance on shared standards, and in their use of modular components that enable individual institutions to develop complex platforms without having to build and maintain them entirely from scratch. What this means is that such systems tend to support convergence better than divergence: localizations or specialized representational capacities need to be negotiated with those standards bodies or with the vendors or developers of shared systems. One thus has to work hard to establish maneuverability; for instance, by including extra layers of data representation that capture more complexity than is supported in standard systems or modifying open-source components (which in turn may entail the cost of supporting that modification in the future). For a project like DAILP, this maneuverability includes things like specialized handling of access and permissions to accommodate access restrictions for culturally sensitive materials; adapting standard editorial review processes to support more socially nuanced forms of feedback to include mentorship, pedagogy, and peer-to-peer commentary; and developing localized versions of standard ontologies and metadata schemes to ensure content is searchable in ways meaningful to scholars, librarians, and community members alike.⁶

This project draws on two closely interconnected initiatives unfolding at Northeastern University library that seek to support digital archival projects like DAILP (CERES). The first of these is the Northeastern University library's ongoing work to develop a repository-based framework for digital scholarly research and publication. CERES, the Community-Enhanced Repository for Engaged Scholarship, and Charon (its editorial toolset) support the creation and publication of metadata, annotations, and complex structured data, such as TEI/XML and RDF.⁷ Both systems rely on very large-scale technical platforms, such as the university's digital repository and related systems for data storage and

management, as part of a deliberate strategy to support a wide range of digital projects through a single, coherent digital platform. The tendency of such systems has been to homogenize the projects that use them, by providing templates, standard vocabularies, and best practices, and such homogeneity certainly would benefit Northeastern's library since it would tend to reduce the effort needed to support individualized designs. However, CERES and Charon are deliberately positioned in critical relation to their architectural logic: the central research question guiding their development is how large-scale digital research platforms can support localization and community-orientation while still retaining the advantages of scale—and in particular, the potential for research materials and cultural heritage materials to be shared and repurposed where appropriate across projects. The pilot projects for CERES and Charon—including DAILP—have been selected precisely because they pose this question in especially challenging forms. For instance, CERES/Charon will support transcription and encoding in TEI and collaborative workflow management and community-sourced transcription and annotation; DAILP adds an additional distinctive set of needs and use cases including transcription in non-Roman alphabets, collaborative community-driven translation (with revision and mentor commentary), and linguistic annotation, by extended project teams that include community members at every level of expertise.

As noted above, these features present themselves initially as “technical” but unfold as much deeper critical challenges that demand social and political reframing of the technical development process. A decolonial process for community-driven translation does not simply entail a wider set of “user scenarios” but rather requires that their creators restructure and rethink what it means to develop such scenarios: who is in the room, how knowledge differentials are mapped onto power, whose goals are given priority.⁸

IMPLICATIONS FOR DECOLONIZING THE ARCHIVE

When peoples, languages, and knowledges come to be appreciated in and on their own terms and when archival materials can be meaningfully integrated into ongoing practices of language use and learning, then, I argue, archives, museums, and libraries move ever closer to the creation of digital archives that can facilitate language interactions. Language perseverance focuses on the everyday indigenous language practices of speakers, learners, readers, and writers necessary to ensure the continuing vitality of the language, while language preservation is aimed primarily at documentation and formal analysis of linguistic features of indigenous languages.

First, with its foundation in historical manuscript documents, DAILP promises initially to bring to light a fuller history of Cherokee language and culture and, eventually, other indigenous language texts as well. These documents were produced during the period between 1830 and 1940 by knowledge-holders who were documenting their own family histories, the history of the tribe, and the practice of regular activities. They bear witness to historical events and provide insight into the lived reality of the Cherokee people. This project will ultimately bring together a wide-ranging and extensive set of manuscripts from archives across the country, reflecting an extraordinary diversity of genres, topics, and creators as well as representing the full geographical and chronological spread of the written Cherokee language: a treasure trove of information about Cherokee language, culture, history, literary traditions, and everyday life. This documentary record has been hidden both by archival isolation and by barriers of language and script. For the many members of the Cherokee tribes who are not fluent speakers of Cherokee (or are unable to read the Cherokee syllabary), this work of transcription, transliteration, and translation will open up access to a dimension of their own history.

Similarly, that history holds immense value for humanities scholars and for public audiences. For scholars and students of American Indian and United States history, ethnography and anthropology, literary studies, ethnobotany, and many other fields, these documents are a crucial resource. This project also provides an important and novel bridge between language learning and the study, translation, and dissemination of historical documents. Existing initiatives to digitize and publicize collections of Cherokee documents, such as those at the Beinecke Library, the University of Tulsa, the Gilcrease Museum, and the National Anthropological Archives, have been focused on presenting digital images of archival holdings but have not treated the documents fully as textual, historical, cultural, and linguistic objects. Similarly, existing language learning initiatives (not only in Cherokee) focus on modern language and de-emphasize the value of historical documents and their combined wealth of linguistic and cultural information. For literacy scholars, these documents and their translations will provide a wealth of primary data from which to better understand the literacy practices of Cherokee peoples, opening to us the possibility of more robust histories of literacy in America, indigenous reading and writing practices, and suppressed epistemological understandings of place. This project makes the dissemination and contextualization of historical documents part of a vital work of language perseverance, performed centrally by and for those with the most at stake.

Second, DAILP will address a key problem of geographic dispersion of both documents and language speakers and learners. By creating an aggregated

working space for transcription, translation, annotation, and language learning, it will allow the DAILP team to bring together community-vetted materials from museums and libraries with significant holdings of Cherokee language archives and work with these materials through a common interface, with the goal of making manuscripts instructive for a variety of stakeholders. Individual manuscripts will retain their identification with their institutional home and will carry with them the detailed metadata developed by those institutions; but users will be able to trace narratives and language usage across the DAILP collection to understand both geographical difference and historical changes in the language. This lateral connection of manuscripts across holdings will benefit museums and libraries in tribal communities as well as larger museums with a broader array of archival holdings. It will also create opportunities for connection within geographically dispersed intergenerational communities, pairing native speakers with those who are younger or have different capacities to work together on transcription and translation, replicating a natural language setting of collaborative interaction. In addition, the project will provide a space in which to gather and provide access to what is known about the new language, including both the deep contextual knowledge of native speakers and also information from formal linguistic perspectives.

Finally, DAILP will yield important outcomes for those working on building community-based digital systems for cultural preservation, and dovetails importantly with work arising from Northeastern University's IMLS-funded Design for Diversity initiative. The framework of tools, workflows, and data resources developed for this project will significantly advance our understanding of how the complex architecture of a project like this needs to be designed in order to meet the many different goals of the initiative: issues of access, data curation and sustainability, scalability, and above all the need to ensure that the technical systems I design to support the initiative are not culturally rigid, but can accommodate the real practices and needs of the language learning communities.

Language documentation projects, such as the one proposed with DAILP, present an opportunity to draw upon apprenticeship models of learning to support meaningful language documentation efforts. Hermes and Engman see these efforts as part of ongoing language and knowledge "reclamation efforts," which include a focus on "everyday language, meaning making, inclusive documentation norms, and collaborative analysis" (59), the very types of transactions that allow peoples to persevere in their languaging efforts. These purposeful and meaningful transactions of translation draw upon peer-mentoring and apprenticeship models (Jenni et al.) and communities of practice models (Weinberg and De Korne) that have shown some success in producing fluent adult language learners. DAILP supports the creation of apprenticeship relationships between learners, speakers,

and translators. It also supports the development of communities of practice between linguists, scholars, archivists, and indigenous communities around the commonly shared goal of the cultural, historical, and linguistic meanings of these documents. In doing so, DAILP promises to contribute to language perseverance and preservation efforts currently underway as it contributes to literacy and textual studies.

These indigenous language manuscripts demand of their readers and translators a de-orientation to these texts—they mandate that these texts be placed into practices of reading and writing that are predicated upon the epistemic terms of the indigenous peoples who originally wrote them. The goal for this reading and writing, the decolonial translation of these texts, is to recover the suppressed epistemologies therein. Along the way, and equally importantly, scholars who engage these texts and practices of collective translation with community members, language learners, and linguists can begin to de-orient their disciplinary questions and knowledge-making practices. The decolonial archive I've envisioned and described here makes possible the collective work of recovering suppressed epistemologies in indigenous language documents—epistemologies that were suppressed by textual orientations that privileged the Roman alphabet and Western epistemic point of view in the first place. Decolonial digital archives open a pathway to de-orient from alphabetic texts, a path that readers, writers, and speakers from all walks can embark upon together if we so choose.

NOTES

1. The project I describe here has been undertaken with various collaborators over time, and most recently with Julia Flanders of Northeastern Library. Her contributions to this particular essay are noted throughout with deep gratitude.

2. See for example Powell's "Digital Knowledge Sharing: Forging Partnerships between Scholars, Archives, and Indigenous Communities," Atalay's *Community-Based Archaeology: Research with, by, and for Indigenous and Local Communities*, Leopold's "Articulating Culturally Sensitive Knowledge Online: A Cherokee Case Study", and Jennifer O'Neal's "Respect, Recognition, and Reciprocity: The Protocols for Native American Archival Materials" and "'The Right to Know': Decolonizing Native American Archives."

3. See Cushman, "Decolonizing the Imperialist Archive" and "Decolonizing Digital Archives" for further discussion of the principles guiding these translation practices.

4. Adopted by the tribal council in 1821, Sequoyah's invention of the Cherokee syllabary led to the creation of millions of print and manuscript pages (Cushman, *The Cherokee Syllabary*). More than 2000 pages of Cherokee language documents exist today in archives and libraries around the country, many of which have been digitized.

5. A fascinating study of Cherokee people's notions of textuality and how these might be incorporated into digital notions of text remains to be undertaken and is unfortunately outside of the scope of this paper to take up.

6. I am grateful to Julia Flanders, my co PI on this project, for description of these efforts.

7. TEI, the Text Encoding Initiative Guidelines, is an XML language widely used in the humanities for representing textual resources. It supports the creation of highly detailed digital texts that can support extremely powerful forms of research and analysis. The transcription, image, and other informational components are associated via RDF, the Resource Description Framework, a data model used for representing interlinked units of information, widely used to create extensive, interchangeable data resources on the Web.

8. In addition to pushing the development of CERES/Charon towards such restructuring, DAILP's presence in the Northeastern University library's ecology prompted Julia Flanders to undertake a larger research initiative, titled Design for Diversity, with funding from an IMLS National Forums grant (Flanders). This initiative brought together experts in library and information science, digital humanities, archives, museum studies, and software development to consider the ways in which information systems embody and reinforce cultural norms and to ask how systems can be designed to account for and support diverse cultural materials and ways of knowing. The outcomes of the Design for Diversity initiative include a toolkit of case studies and teaching/learning materials, hosted in partnership with the Digital Library Federation, and also an emerging set of design principles for Northeastern itself, with the goal of building decolonial practices into the group's development philosophy. In an applied research context (and one in which many of the tools in question are developed elsewhere), these design principles are only the starting point for a much longer process of understanding how to apply these principles in practice, but the starting point is a critical step.

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