
Review

INDIGENOUS LEXICOGRAPHY: A REVIEW OF RECENT DICTIONARIES AND WORKS RELATING TO LEXICOGRAPHY

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Abstract

In this review essay, we compare five recent publications relating to dictionary work with Indigenous languages. The review covers three dictionaries, one monograph about lexicography in service of Indigenous language revitalization and the second volume of a two-volume dictionary-cum-encyclopedia. The structure of this review essay is as follows: following a brief introduction to each of the languages covered in these five publications, we include sections comparing orthographic choices and representations, internal structure and entry design, an examination of each dictionary's approach to the incorporation of neologisms and the software choices made by compilers. In addition, we offer an analysis of each dictionary's intended audience and access requirements, some structured reflections on authorship and ownership, an exploration of each project's commitment to community engagement, strategies for the representation of dialectal variation and finally, relevant information about how each dictionary project was funded and resourced.

1. Introduction

In this article, we offer a comparative review of five recent publications relating to dictionary work with Indigenous languages. The review covers three dictionaries, one monograph focussing on lexicography in service of Indigenous language revitalization and the second volume of a two-volume dictionary-cum-encyclopaedia. All works were published in the last five years. Considering both the content, format and methods of work, we find it significant to note that all five publications were published in and/or relate to the linguistic context of settler-colonial Anglophone nations. Three of the five publications under review are geographically situated in North America—the works on Ponca, SENCÓFEN

(Saanich) and Tunica respectively—while the other two publications originate in Australia, and in the Northern Territories in particular, their focus being the Ngarinyman and Yanyuwa languages respectively. Before engaging substantively with the texts under review, we offer a structural overview of each publication, organized by release date.

Published over the course of two years, *Wuka nya-ngamunga li-yanyuwa li-anthawirriyarra: Language for Us, the Yanyuwa Saltwater People: A Yanyuwa Encyclopaedia*, is authored by Yanyuwa Families and John Bradley. The two volumes were published by the independent academic publisher Australian Scholarly (ASP) in 2016 and 2017. This is a massive work: the first volume clocking in at 618 pages and the second at 792 pages. Taking advantage of this expansive format, the first volume introduces the Yanyuwa people and their traditional territories, with sections on the history of language recording made in the community, texts in the Yanyuwa language, as well as Yanyuwa songs and poetry. This first volume also includes appendices with Yanyuwa word games, Yanyuwa Sign Language and Yanyuwa string games. The second volume is more focussed on linguistic description, and is helpfully subdivided into sections entitled Grammar, Dictionary, and Word Finder.

Timothy Montler's *SENĆOFEN: A Dictionary of the Saanich Language* was published by the University of Washington Press in 2018. At 1,520 pages, this is the longest publication covered in this review. While the central component of the monograph is the SENĆOFEN-English dictionary, the publication opens with an introduction to SENĆOFEN (also known as Saanich), followed by general information pertaining to the dictionary, its format, a reflection on the choice of symbols and a discussion of how annotations are used. At the conclusion of the dictionary, Montler includes an English-SENĆOFEN index, an affix index as well as a root index as additional resources for the reader.

Published by the Aboriginal Studies Press in 2019, the *Ngarinyman to English Dictionary* was compiled by Caroline Jones, Eva Schultze-Berndt, Jessica Denniss and Felicity Meakins, with many other additional contributions listed on the cover. Totalling 292 pages, the publication opens with an introductory section that describes the speech community and the wider project, followed by sections on skin names and kinship, an explanation of the alphabet and the chosen orthography, followed by a general grammatical introduction to the language. This section also offers context about the production of the dictionary and some suggestions on how it might be best used. Thereafter begins the Ngarinyman to English dictionary, followed by an English to Ngarinyman word finder. An English to Ngarinyman scientific name finder offers pathways for users to look up Ngarinyman terms for fauna and flora.

Written by Louis Headman with Sean O'Neill and with the Ponca Council of Elders—Vincent Warrior, Hazel D. Headman, Louise Roy, and Lillian Pappan Eagle—the *Dictionary of the Ponca People* (DPP) was published by the University of Nebraska Press in 2019. Comprising 416 pages, the book is structured in three sections: an introduction—with notes on Ponca orthography, pronunciation, and grammar, as well as some information about the dictionary entries—a Ponca to English dictionary, and thereafter an English to Ponca dictionary.

Finally, while not a dictionary per se, and therefore somewhat of an outlier in this comparative review, we have included *Revitalization Lexicography: The Making of the New Tunica Dictionary* by Patricia Anderson on account of the relevance of this recent work to

our discussion. Published in 2020 by the University of Arizona Press, this short book of 160 pages outlines how dictionaries can be designed to facilitate the reversal of language shift and foster linguistic innovation. Through the lens of Tunica, one of the heritage languages of the Tunica-Biloxi Tribe of Marksville, Louisiana, *Revitalization Lexicography* provides a detailed account of the complex processes and technical steps involved in creating a dictionary that can assist a once sleeping language become a language of active daily use once again.

With these introductory comments complete, we now offer a brief introduction to each of the languages covered in these five publications, followed by sections in which we compare and contrast the publications under review with regard to their chosen orthographic representation; their internal structure and entry design; their perspective on neologisms and choice of software; their anticipated audience and accessibility; their approach to authorship, ownership, and access; their commitment to community engagement (when relevant); their strategies for the representation of varying dialects (if applicable); and finally, information about how the dictionary projects were funded and supported.

2. Language, culture, and territory

Ngarinyman is a language of the Pama-Nyungan language family with around 234 speakers (2016 census, as cited in [AIATSIS collection, n.d.](#)) and is classified as moribund¹ (8a) on the EGIDS² scale according to the Ethnologue ([Eberhard et al., 2021](#)). Ngarinyman is a member of the Ngumpin subgroup of Pama-Nyungan languages, which also includes other languages such as Gurindji, Bilinarra, Malngin, Wanyjirra, Mudburra, Karrangpurru, Jaru, Nyininy and Walmajarri (p. 1). Ngarinyman is spoken in the Victoria River District, in the Northern Territory of Australia.

Yanyuwa is also a member of the Pama-Nyungan language family and is spoken by only around 39 individuals (2016 census, as cited in [AIATSIS Collection, n.d.](#)) and classified as shifting³ (7) on the EGIDS scale ([Eberhard et al., 2021](#)). Yanyuwa is spoken in and around the township of Borroloola. While the language forms its own subgroup ([Eberhard et al., 2021](#)), Yanyuwa is geographically close to speakers of Garrwa, Binbingka, Gudanji, Wilangarra, and Marra (p. 6 and map 2).

The three languages spoken in North America that we cover in this review are unrelated to one another. In 2007, Ponca was documented as having around 87 speakers (Golla, 2007, as cited by [Eberhard et al., 2021](#)), and is classified as moribund (8a) on the EGIDS scale. Ponca is a language of the Siouan family, closely related to the language spoken by the Omaha Tribe of Nebraska, and more distantly to Osages, Kaws, and Quapaws, all of which are described as *Ďégihà* languages in the text (pp. ix-x). The Ponca language is spoken in the states of Oklahoma and Nebraska in the United States.

SENĆOFEN is a dialect of Northern Straits, a Salish language related to Klallam. It has around 112 speakers ([Eberhard et al., 2021](#)), and is classified as nearly extinct⁴ (8b) on the EGIDS. SENĆOFEN is spoken on both sides of the Canadian and U.S. border, with communities in the Saanich Peninsula of southern Vancouver Island, British Columbia (Canada), and on the islands of the Haro and Rosario Straits and southern Strait of Georgia, in Washington state (U.S.).

Finally, Tunica is a language isolate with around 32 speakers, and classified as reawakening⁵ (9) on the EGIDS scale. The Tunica language is the traditional and ancestral

language of the Tunica people, now known and federally recognized as the Tunica-Biloxi Indian Tribe located in east-central Louisiana. Historically, the Tunica migrated south—from the Central Mississippi Valley to the Lower Mississippi—eventually moving westward to settle around present-day Marksville, Louisiana, where the current Tunica-Biloxi Indian Reservation is located.

While it can be challenging to gain a rich cultural understanding about a community from the pages of a dictionary, most of the publications under review use their introduction or preface to offer readers some insights into the history of the speakers of the language and their traditional territory. In the DPP, the reader learns about the community's rich and complex history, their orthographical choices through the years, and how their ancestral language (Đégihà) has been replaced by English. Similarly, the preface to the Ngarinyman to English Dictionary introduces readers to the development of the research project that generated the dictionary and names the many collaborators who contributed to its compilation, alongside relevant cultural and historical background in a section entitled "Language and History". In the case of *SENĆOFEN: A Dictionary of the Saanich Language*, the brief preface is dedicated solely to situating the Saanich language, and a later section entitled "About the Dictionary" provides details about the project and the compilation of the dictionary.

Making use of the more comprehensive format offered by an encyclopaedia, the Yanyuwa Families and Bradley took the opportunity to dedicate several pages of their first volume to the history of the Yanyuwa language, the speech communities, and their territories and to offer some remarks on the education system. In terms of visual representations, both the Ngarinyman and the Yanyuwa publications include a map showing the location of the language communities and outlining the distribution of languages in nearby territories, offering readers helpful geographical context. By contrast, *Revitalization Lexicography*, DPP, and *SENĆOFEN* offer fewer visuals and images.

3. Orthography

While some Indigenous languages have well-established practical writing systems (Schillo and Turin, 2020), it is not uncommon for under-resourced languages to use elements of the English alphabet to serve as a basis of their orthography. This is the case for four of the publications under discussion in this review.

According to *Revitalization Lexicography*, while the Tunica orthography was developed decades ago, it was only more recently adapted for contemporary use. The Tunica orthography was based on the NAPA (North American Phonetic Alphabet) system, with a few salient diacritics. Choosing to maintain the earlier orthography was a decision that benefited the community, since it facilitated access to historical texts and older materials without requiring that individuals learn two entirely different orthographies.

The Ngarinyman and Yanyuwa publications both use Roman orthography, although unlike in English, there is a clear and consistent correspondence between letters and sounds that represent the phonological inventory of each language. The intention in each case was to provide written words that would reflect the way that Elders speak while at the same time maintaining a writing system that would be familiar to users. Each volume is supplemented with a pronunciation guide. The Ponca and the *SENĆOFEN* publications, on the other hand, make use of a practical orthography that mixes elements of the English

alphabet with associated diacritics, in order to better capture the phonological inventory of the language.

While a Ponca-specific orthography was developed by linguist James O. Dorsey some decades ago, which he used in his many publications on the Ponca language, Dorsey's writing system has not gained traction within the community. The DPP instead makes use of a practical orthography based on the 'Americanist system', using orthographical and typographical conventions such as acute [á] and grave [à] accents, the ogonek/forward hook [ą] and the hacek [š], with the goal being that the language in general and this text in particular remain maximally accessible to community users. The alphabet and diacritics are explained in a pronunciation guide, located in the publication's Introduction.

The SENĆOFEN practical orthography was developed by Dave Elliott, an Elder from the community and an L1 speaker of the language. This orthography is based on a one-symbol-per-sound alphabet, making use of uppercase letters from the English alphabet with added diacritics/symbols, such as acute accents [Ć], forward slash [Ā], cedilla [M,] line below [K], and stroke [F]. The dictionary includes a pronunciation guide to assist readers unfamiliar with the orthography.

4. Entry design and ordering

In this section, we briefly analyse the structural design and lexical ordering of entries in each publication. Deciding what should be included in word entries and how such entries are best organized within the pages of a dictionary are decisions that should be based on the anticipated needs of the users of that dictionary. These decisions are discussed in a comprehensive manner in chapter 4 of *Revitalization Lexicography*, in which Anderson raises many key questions that must be considered before settling on a specific design. Which words should be headwords? How much information should a definition or gloss contain? Should entries be ordered alphabetically, semantically, or grammatically? How should verb paradigms be presented in the dictionary? Should neologisms be included? These are just a few of the important issues raised in *Revitalization Lexicography*, some of which are discussed later in this review.

Reviewing the proposed microstructure for the New Tunica Dictionary, Figures 1 and 2 below offer snapshots of how, according to *Revitalization Lexicography*, an irregular verb (*erusa* 'know') would be portrayed in the Tunica-English section of the dictionary. This includes a principal entry with greater detail along with several independent entries (spread across the dictionary in alphabetical order), with derived forms of irregular verbs referencing back to the relevant principal entry. In terms of entry design, Anderson explains how this was a conscious choice to facilitate word lookup, noting that the English-Tunica section of the dictionary does not offer the same feature, rather referring users to the appendix for additional help with verb derivation. In general, both directions of the New Tunica Dictionary are organized alphabetically and semantically, sometimes locating related cultural vocabulary under generic if significant words like *dance* (in the English-Tunica section) in order to direct users to a centralized reference.

The entry design of the Ponca dictionary includes head words written in the practical orthography, followed by a phonetic key (separated by syllables), the part of speech (adjective, article, noun, etc.), an English definition(s), and, when applicable, related words or examples (see Figures 3 and 4). Ponca verbs are listed in their basic form, with only some of

erusa *v.st* know, I know: this verb is irregular, see appendix for grammatical info. “*Tahɔhkaheluni ihkeni kitap’ɛnhch, erusa kashi yanik’ahcha,*” *nikatɛni*. “If I put my hand in the hole, I will know for sure,” she said.

erunasa *cf. erusa v.st* we know

herunasa *cf. erusa v.st* you all know (f)

herusa *cf. erusa v.st* you know (f)

orunasa *cf. erusa v.st* they know (2m)

orusa *cf. erusa v.st* he knows

serunasa *cf. erusa v.st* they know (f)

serusa *cf. erusa v.st* they all know (m)

terusa *cf. erusa v.st* she knows

werusa *cf. erusa v.st* you know (m)

werunasa *cf. erusa v.st* you all know (m)

Figure 1: Entries for Tunica verb *erusa* and its derived forms (p. 69)

know **erusa*, **erunasa v.st* [this verb is highly irregular, see appendix]
 “*Tahɔhkaheluni ihkeni kitap’ɛnhch, erusa kashi yanik’ahcha,*” *nikatɛni*. “If I put my hand in the hole, I will know for sure,” she said.

Figure 2: Entry for English verb ‘know’ with Tunica gloss (p. 70)

Hiɖá /hē-thä’/ *v.*, swim, go swimming
Hiɖá’ /hē-thä’/ *v.*, bathe, 1. to bathe, wash, cleanse, clean, etc. 2. to swim

Figure 3: Example entries for two closely related Ponca verbs (p. 94)

bathe **Hiɖá’** /hē-thä’/ *v.*, bathe 1. to bathe, wash, cleanse, clean, etc. 2. to swim

Figure 4: Example English-Ponca entry for the verb ‘bathe’ (p. 224)

the required affixes, sometimes followed by verb paradigms for person and number. When archaic terms are included, they are labelled as such, and their approximate period of use is given. Turning to macrostructure, in order to accommodate diacritics and the absence of some English letters in the orthography, the order of Ponca entries follows a customized



Figure 5: Example Ngarinyman entry for the verb *gurl* (p. 124)

drink.....cv. **gurl**

Figure 6: Example English-Ngarinyman entry for the verb 'drink' (p. 248)

alphabetical order that deviates significantly from English. All Ponca entries are listed beginning with an uppercase letter.

The Ngarinyman dictionary entries are composed of a head word, the word class (case, noun, verb, etc.) to which the entry belongs, an English definition(s), Ngarinyman synonyms as appropriate, examples, and related words or sub-entries (see Figures 5 and 6). In some cases, usage is identified—in particular if a term is used only in certain communities—while entries for fauna and flora contain both scientific names and additional information about how to locate or use them. Ngarinyman verb entries are presented as a headword in the present tense followed by sub-entries with other tense forms and combinations. The different tense forms of verbs can also be found as independent headwords throughout the dictionary—a decision that facilitates ease of browsing by beginner language learners, as they can easily look up the meaning of a verb they have heard or read without having to derive the verb's paradigm. As a bonus, the Ngarinyman dictionary offers illustrations throughout the Ngarinyman-to-English section, providing a visual reference for several entries (see Figure 5). As for entry order, Ngarinyman entries are organized following the English alphabetical order, albeit with the addition of Ngarinyman-specific phonemes (like *ng* and *ny*) and skipping letters that do not exist in the Ngarinyman orthography or do not occur in word-initial position. All entries are listed beginning with a lowercase letter, with the exception of proper names.

Entries in the Yanyuwa dictionary consist of a headword followed by the word class to which the term belongs, an English definition(s), example sentences in Yanyuwa and their translations, and related words or concepts when applicable and as appropriate (see Figures 7 and 8). The Yanyuwa example sentences derive from collected texts, actual day-to-day conversations and interactions, and some demonstrations of 'formal' language. In addition, the Yanyuwa publication includes drawings in the English–Yanyuwa Word Finder section, offering full-page visual representations of events, dances, animal parts and the like between subsections divided by letter. While verbs in the dictionary are listed in the present participle form as this is the form commonly used by speakers during elicitation

marninymantharra intransitive verb.
 1) jumping; 2) jumping over; 3) leap-
 ing; 4) springing up, of water.
 Example: (w) *Kiwa-arri football nya-
 ardu nya-wukuthu ankaya kiwa-
 marninymanthaninya aluwa linji-
 jakardala ngulakari kiwa-arri kiwa-
 marninymanthaninya yurrngumantha
 wunkanathawu awara.* = The little
 boy was at the football and up he
 jumped, from behind the large
 crowd; he was constantly jumping up
 to see the football ground. An extend-
 ed form of this word is
manmarninymantharra.

Figure 7: Example Yanyuwa entry for the verb *marninymantharra* (p. 319)

jumping = *marninymantharra*
 jumping over = *marninymantharra,*
manmarninymantharra

Figure 8: Example English-Yanyuwa entries for the verb ‘jumping’ and ‘jumping over’ (p. 641)

and when citing verbs, other forms can be derived by referring to chapter 6 of the Yanyuwa Grammar, which precedes the dictionary section. Different affixes—such as noun-class prefixes and tense and pronoun suffixes—used in the language are also covered in the grammar section. Entries in the Yanyuwa dictionary are organized roughly following an English alphabetical order (according to the available sounds in Yanyuwa) with the addition of some combinations of Roman letters that are particular to the Yanyuwa phonology (such as *lh*, *ng*, and *m*), resulting in a language-specific ordering. All entries are listed beginning with a lowercase letter, except for proper nouns (including clan related words).

In the SENĆOŦEN dictionary, each entry begins with a SENĆOŦEN headword (the most used variant), followed by a phonemic form in the North American phonetic alphabet, an English definition(s), commentaries about the cultural context and usage of the word when helpful, and an example sentence, followed by variants of the word if applicable (see Figures 9 and 10). Part of speech is not included in the SENĆOŦEN dictionary. Entries also include the initials of the Elder(s) who served as the source for or contributed a particular word. At the end of each entry, word variants and a hypothetical morphological analysis of the root or affixes of a given word are also occasionally offered. The entries are in broad strokes organized following an English alphabetical order, although with the addition of diacritics the result is really a customized alphabetical order. This customized alphabet is helpfully printed at the bottom of each page of the dictionary for easy reference. While SENĆOŦEN verb entries use English infinitive forms, as in ‘to + verb’ in their definition,

sleep intentionally closed eyes, to make like
 sleeping: NEKÓLES. to go to bed, be in bed, sleep:
 ITET. to go to sleep, fall asleep: NEK. to manage to
 finally put someone to sleep or to bed: ETOTNEW. to
 be asleep: NOKÉL. to be sleeping, asleep: I,TET. to
 finally get to sleep: ITETNONET. to have a tired,
 tingling feeling as part of the body has gone to
 sleep, pins and needles feeling: DEL,DEL,ÁL,SEN. to
 manage to finally go to sleep or to fall asleep
 accidentally: NEKNONET. to put someone to sleep,
 send someone to bed: ETOTTW.
passive being put to sleep by someone or
 something: ITETTEN. to be put to sleep by
 someone or something: ETOTTEN.

Figure 10: English-SENĆOFEN entry for the verb 'sleep' (p. 1022)

the basics of the language grammar, which can be helpful for new learners of the language. The exception is the *SENĆOFEN* publication, which offers only a few paragraphs introducing three basic elements of *SENĆOFEN* sentence structure. While Montler states that a full grammar is in progress, he directs the reader to his previous works for more info about *SENĆOFEN* syntax and verb paradigms. Referencing the *New Tunica Dictionary, Revitalization Lexicography* notes that its anticipated front matter will also contain a sketch grammar⁶ of Tunica for pedagogical reference.

An additional element of megastructure relates to the order of languages in a bilingual dictionary, namely which language (Indigenous or dominant) is listed first in the volume. Reading the titles of the texts under review: *Ngarinyman to English Dictionary*, DPP, *SENĆOFEN: A Dictionary of the Saanich Language*, and *Wuka nya-nganunga li-yanyuwa li-anthawirriyarra: Language for Us, the Yanyuwa Saltwater People: A Yanyuwa Encyclopaedia*, in addition to the *New Tunica Dictionary* described in *Revitalization Lexicography*, each of these dictionaries list the Indigenous language first in their titles, and in each case, the Indigenous language is presented first in the text. While we acknowledge that a dictionary of an Indigenous language with very few or no living native speakers might be more focused on language production (speaking and writing) rather than language reception (reading, listening and comprehension), by listing the Indigenous language first, more authority and visibility are accorded to the language (cf. [Sear and Turin, 2021](#)).

The difference between the two sections of a bilingual dictionary extends beyond the order or sequence in which the languages are presented and relates to the amount of information contained in the entries of each section. Bilingual dictionaries tend to be fairly asymmetrical for both logistical and financial reasons, with one direction (usually the Indigenous language to English) often carrying considerably more information than the other. This is certainly the case for most of the dictionaries reviewed, except for the DPP, in which the Ponca-English and English-Ponca seem to contain the same amount of entry information. With a more symmetrical distribution of information, the Ponca dictionary is likely focussed on supporting both reception and production of the language, benefiting advanced speakers, scholars and new language learners alike.

On the other hand, the *Ngarinyman to English Dictionary* includes considerable detail and encyclopaedic information in the *Ngarinyman to English* section, but only word class

and gloss in the English to Ngarinyman word finder, and the same in the scientific word finder which lists scientific names in Latin followed by word class and Ngarinyman correspondence. Similarly, the English-Yanyuwa side of *A Yanyuwa Encyclopaedia*, labelled simply as ‘Word Finder’, lists only English headwords and their Yanyuwa glosses. This approach requires users to perform a double lookup: first looking at the English for a quick reference and cross-checking the words in Yanyuwa against the other side of the dictionary for further information on meaning and use.

The SENĆOŦEN dictionary, while carrying more information on the SENĆOŦEN-English side, still includes a fair amount of information in the English-SENĆOŦEN Index, with entries listing English meanings for multiple potential SENĆOŦEN glosses and—when applicable—sub-entries of different forms of the word (diminutive, passive, collective, etc.) or related terms under a similar category.

Distinct from the other dictionaries, the New Tunica Dictionary discussed in *Revitalization Lexicography* offers more information in the English-Tunica direction. ‘Since the English–Tunica side is used for production, KYLY⁷ felt it was important to pack the entries with more information that might lead to correct usage’ (Anderson, 2021: 65). This decision is particularly relevant in the case of Tunica because the language had no living L1 speakers, and investing in language production was a community priority for revitalization purposes and to stimulate its return to a position of daily use. However, it is relevant to note that the Tunica-English side of the eventual dictionary will contain more than a simple English gloss, and will include part of speech labels, an English gloss, a Tunica example sentence (with English translation) and some additional extralinguistic information. The Tunica Dictionary team opted for this approach to avoid the challenge of ‘double lookup’ and to improve the usability of the final dictionary.

6. Neologisms and software choices

A question posed by Anderson in *Revitalization Lexicography* is whether or not to include neologisms in a dictionary of an Indigenous language. This question is as relevant for non-Indigenous dictionaries as it is for Indigenous lexical collections, and more established lexicographical programs—we may think of Merriam-Webster or the Oxford Dictionaries—have well-established processes and protocols for adding new terms.

In the Tunica Language Project, there was agreement that new words would need to be incorporated into the language in order to fill lexical gaps relating to newer technologies and missing terminology, all with the goal of reintroducing Tunica as an active language in a wide variety of social contexts. To create those words, the project organized and hosted workshops with community members who were encouraged to play creatively with Tunica morphology and through this process, suggest names for animals, plants, and other nouns. The suggestions were then evaluated by the KYLY, and some were ultimately approved and chosen as official entries for the New Tunica Dictionary. This initiative combined aspects of community engagement and ownership with practical pedagogical opportunities for Tunica learners to become more familiar with Tunica morphology and processes of word formation.

While the four dictionaries under review do not in general clearly state their approach to the inclusion of neologisms, across the publications and with the exception of Yanyuwa, more contemporary terms such as ‘phone’, ‘cellphone’, ‘camera’, and ‘computer’ have been

included with Indigenous glosses, suggesting that at least some neologisms have been added to the languages. Making this process more explicit, the DPP states that the volume's 'expanded set of words includes some that deal with modern devices used in today's world' (p. vii).

Given the complexity of the task of dictionary compilation, we find it relevant to include a discussion of the software that each dictionary project used to organize its lexicographic data. Two of the publications under review make explicit reference to their software choices, with Anderson (the author of *Revitalization Lexicography*) making use of FLEx⁸ for their lexical database and Montler (the author of SENĆOŦEN) opting for the Field Linguist's Toolbox for the dictionary, Lexware for the finderlist and subentry structure, and AutoHotKey for coding source of words.

Anderson addresses the pros and cons of using existing lexicographic software versus designing a proprietary database for the work. Developed by SIL International, Anderson suggests that FLEx was a strong option on account of its multiple user function and wide support of 'non lexicographic components such as an interlinear analysis section, a grammar section, and even a parser to speed up the analysis of future texts' (p. 52). Anderson concludes the discussion noting that while FLEx was ostensibly designed for technically-trained linguists, and that its impressive feature list can be intimidating for non-linguist community members, the potential for multi-user collaboration and the support offered by SIL's online community and staff were deciding factors in its adoption for the Tunica project.

While recognizing that Field Linguist's Toolbox (also developed by SIL International) was designed for a 'one-lexicographer' project, Montler chose this software on account of its flexibility, functionality, and ease of use. For the SENĆOŦEN project, Toolbox was used to "enter all handwritten notes as analysed interlinear text with word, morpheme, and free glosses" (p. xv). Montler adopted Lexware (developed by Robert Hsu at the University of Hawaii, specifically for the compilation of bilingual dictionaries) to support the development of subentries and to generate the English-SENĆOŦEN finderlist, which were not functions covered by Toolbox. In addition, Montler recognizes AutoHotKey and EditPad Pro as important tools for source referencing and for minor editing, respectively.

7. Intended audience and accessibility

As Sear and Turin note, 'lexical collection in general and dictionaries in particular offer significant value and lasting importance to language documentation, preservation, and revitalization projects, in large part because of their imagined comprehensiveness and relative accessibility' (2021: 238). In this section, we explore the target audience of each publication, how accessible each text is to its anticipated readers, and consider the medium of publication and purchase price.

The DPP is available in print and online versions, with a paperback copy costing 35.00USD and a hardback or an eBook (pdf or Epub) costing 65.00USD, as reported on the University of Nebraska Press website ([Nebraska Press, n.d.](#)). The reviewers are somewhat mystified as to why a digital and downloadable file would cost the same as a hardback copy, and additionally why a digital file is priced higher than a paperback edition given that this format has no associated printing costs. While the Ponca dictionary states that it is 'not intended to recover or regain a cultural period or practice' but rather to 'serve

as a reference to the spoken language of the people' (p. vii), the testimonies on the back cover might indicate otherwise, demonstrating how users view the dictionary as being much more than a reference volume and rather as a key tool for language preservation and revitalization:

'Through assimilation and termination policies of the United States, our language is critically endangered. The Ponca Community Dictionary will be a vital tool in preserving and revitalizing the Ponca language. The Ponca Tribe of Nebraska will be utilizing it for future generations of Ponca speakers.' - Larry Wright Jr., chairman of the Ponca Tribe of Nebraska.⁹

The *Ngarinyman to English Dictionary* is available in paperback for only 25.39USD, through the digital store front of the AIATSIS website ([AIATSIS Shop](#), n.d.). An eBook version can also be found on many different websites and is currently priced at 13.25USD on Amazon.com.¹⁰ The Ngarinyman dictionary was published under the auspices of the AIATSIS Indigenous Language Preservation: Dictionaries Project which emerged in response to the growing crisis of language endangerment across Australia. The Ngarinyman dictionary is intended to serve a broad audience, from interpreters and translators to all Ngarinyman speakers (from beginner to advanced levels) and will be valuable to any individual interested in the language and culture. More recently, a project has emerged to develop a talking e-dictionary for Ngarinyman that will contain sound files for each headword ([ARC Centre of Excellence for the Dynamics of Language](#), 2021).

A Yanyuwa Encyclopaedia covers a great deal of material in its two expansive volumes that will be highly relevant to linguists and ethnographers. These volumes were also produced with the goal of stimulating young, new and future generations of speakers to learn more about their ancestral language and culture. On the Australian Scholarly website, each volume is individually priced at 59.95AUD in paperback, and the two volumes can be purchased together for 99.95AUD ([Australian Scholarly Publishing](#), n.d.). The reviewers are not aware of a publicly available digital file for purchase or download.

SENĆOFEN: A Dictionary of the Saanich Language is a costly publication, available in hardcover for 150.00USD through the University of Washington Press website ([University of Washington Press](#), n.d.). While the price tag is high, it is in keeping with the weight and size of this hardback publication and with the quality of its print. The author provides a link to a webpage¹¹ with a simpler Saanich wordlist and other useful resources for writing, along with morphological and pronunciation guides designed to support learners of the language. The print dictionary is a result of a revitalization program for the SENĆOFEN language, and the publication is intended to reach a wide audience, including future generations of SENĆOFEN speakers. The degree of grammatical information included relating to the morphological composition of words and the inclusion of specific indexes for affixes and roots indicate that a significant academic audience is also anticipated for this publication.

Revitalization Lexicography is available in both hardcover and eBook versions for 50.00USD, through the University of Arizona Press website ([University of Arizona Press](#), n.d.). This publication is aimed at a readership of Indigenous and non-Indigenous activists involved in language revitalization and lexicography projects, guiding them through the many steps, decisions and potential challenges involved in producing a dictionary. The New Tunica Dictionary, discussed in this volume, already has an online webpage¹² that hosts a simplified version of the dictionary currently freely accessible to any interested user.

8. Ownership, control, access, and possession

For many Indigenous communities, the institutional momentum behind open access imperatives can run the risk of infringing—and in some cases even violating—long-held cultural protocols about who should be privy to certain forms of information and traditional knowledge, and when and how these are to be shared. The First Nations principles of OCAP®—Ownership, Control, Access and Possession—are important standards that lexicographers in particular and language workers in general could benefit from better understanding (First Nations Information Governance Centre, n.d.).¹³ All of the publications analysed in this review article explicitly acknowledge Elders and other community members who contributed to the compilation and production of these works.

Revitalization Lexicography offers a helpful reflection on this very topic: ‘community members own their language and their traditional knowledge; and the community has a right to decide how it is represented in all printed materials, dictionary or otherwise’ (p. 80). With this in mind, and as outlined throughout the publication, Anderson consulted about every aspect of their work with the Tunica Language Project (TLP) as well as with the community at large, with the goal of ensuring that the community felt ownership about what data was included and what could appropriately be shared with a public readership. At the very start of the book, Anderson also highlights community ownership and control of the project by noting that ‘the TLP is a community-driven language revitalization effort owned and directed by the Tunica-Biloxi Tribe; which is to say that while anyone associated with the TLP can propose revitalization ideas and projects they’d like to work on, community-proposed initiatives are given priority and Tunica-Biloxi leadership ultimately determines which proposals are pursued’ (p. 4).

A further way of highlighting ownership, control, access and possession of a language by a community is through the explicit acknowledgement of a community’s participation by recognizing their contributions to the dictionary project itself (see Turin, 2021, for additional discussion). In the case of the *DPP*, the authors Louis Headman (Ponca elder and senior researcher) and Sean O’Neill (anthropologist) are listed alongside the Ponca Council of Elders (Vincent Warrior, Hazel D. Headman, Louise Roy, and Lillian Pappan Eagle) on the title page. In the very first pages of the publication, individual Elders and community groups are recognized by name for their contributions to this joint project.

In *the Ngarinyman to English Dictionary*, recognition is made highly visible on the cover of the publication, which lists compilers Caroline Jones, Eva Schultze-Berndt, Jessica Denniss, and Felicity Meakins, followed by a list of Elders and other community members who are recognized as having contributed to the project. *The Ngarinyman to English Dictionary* also dedicates four pages to photographs in memory of some of the contributing Elders.

In *A Yanyuwa Encyclopaedia*, a choice was made to list the community as a whole alongside a specific scholar, with authorship taking this form: ‘Yanyuwa Families and John Bradley’. Locating the Yanyuwa families before the name of the linguist compiler serves to highlight the centrality of intellectual contributions by the community. In the publication itself, many Yanyuwa individuals who played a role in the work are also acknowledged by name.

In *SENĆOŦEN: A Dictionary of the Saanich Language*, Montler is accorded sole authorship, albeit in collaboration with Elders, even though their names do not grace the

cover of the publication. Further into the publication, four pages are dedicated to acknowledging each Elder by name, together with an image and additional information that addresses their specific contribution to the volume. The initials of each contributing Elder are included in both entries and example sentences throughout the dictionary, offering a tangible indication of the provenance of linguistic information. An important manifestation of community control over the publication can be located in the decision to omit traditional personal names from the dictionary, as these are considered to be private property belonging to specific Saanich (W̱SÁNEĆ) families. Listening to community wishes and being respectful of protocols and cultural traditions are central features of community-based language projects (see [Sear and Turin, 2021](#)).

9. Community investment and engagement

We now turn to examine the broader research context that brought these texts to life by looking at the involvement of the speech community in the production of each publication. While it is clear from the high-profile recognition of the contributions of Elders in each case that traditional knowledge holders and language speakers were invaluable resources for data collection and analysis, we find it instructive to learn more about how community members were involved in decision-making and how (or whether) each publication was shaped to meet the needs of the speech community. After all, ‘community collaboration in designing the dictionary’s structure and organization helps ensure that the dictionary will be usable to and accepted by generations of new language speakers’ ([Anderson, 2020](#): 102).

The Tunica Language Project (TLP) described in *Revitalization Lexicography* is a community-driven research project that trained community members in the relevant software and necessary linguistics skills so they would have autonomy in designing and implementing their lexicography project long term. A Tunica working group named KYLY was formed to advance the work and serve as the decision-making body each step of the way, always in response to the needs of the Tunica community. Regarding project aims, Anderson notes that ‘the process of clarifying our goals was one of regular and direct consultation with Tunica community members, with the support and collaboration of the tribally run Language and Culture Revitalization Program’ (p. 43).

In the introduction, the *DPP* speaks to how the project was inherently and very intentionally community-based, with the senior researcher—Headman—himself a member of the Ponca Council of Elders. The project benefited from several meetings with Ponca Elders to learn, review, discuss and critique Ponca words and their pronunciations, spellings and meanings. Headman collected many notes and multiple recordings over the years from family, friends and other community members, all of whose collected knowledge contributed to the making of the Ponca dictionary.

The cover of *Ngarinyman to English Dictionary* offers a tangible indication of how many people were involved in this project. While only four individuals are listed as compilers, 28 more names grace the cover as contributors to the project, and many of these are members of the Ngarinyman community. This prominent billing on the face of the publication indicates a powerful level of involvement on the part of the community in this important dictionary project. Moreover, this work and the published product have a deep history—23 years of collaboration—and a very interdisciplinary bent, the dictionary being

the result of longstanding collaborations between linguists, an ethnobiologist and the Ngarinyman community.

The *Yanyuwa Encyclopaedia* volumes are similarly the result of a three-decade long relationship between the author (Bradley) and the members of the Yanyuwa community. Bradley mentions by name the many Yanyuwa teachers, mentors, families and friends who were intimately involved in the language learning and documentation journey, and speaks to the continuous support of the community which made it possible to produce these encyclopaedic volumes. Across the two volumes, there is generous evidence of the years of interviews, word recordings, transcriptions, and the collection of stories and songs by Bradley during his extensive work with the Yanyuwa community. The resulting text is culturally rich and engages directly with the desire of the community to transmit and teach their language and culture to future generations.

SENĆOFEN: A Dictionary of the Saanich Language recognizes each of the 26 Elder speakers who contributed their knowledge to the dictionary, both at the outset of the publication and subsequently in each entry. In the Acknowledgements, the authors highlight the significant contributions of two specific Elders—Lou Claxton and Belinda Claxton—who spent many hours working on specific entries and transcriptions; acknowledge the additional help of the Elliott siblings (John, Linda, and Jim) and their insights on insect and bird names in *SENĆOFEN*; and recognize the support of the WSÁNEĆ School Board, the Saanich Adult Education Centre (SAEC), and the Tsawout (East Saanich) band offices. Such explicit recognition points to a high level of community involvement in the production of this dictionary and speaks to the manner in which the team worked with multiple research assistants, apprentices, and linguists.

10. Dialects and strategies for representing variation

The ‘ubiquitous challenge of balancing descriptivism and prescriptivism in dictionary projects of Indigenous languages can take many forms, a common issue being how to represent (describe) different dialects or variations of a language in a dictionary without identifying a standard form (prescribe)’, write [Sear and Turin \(2021: 246\)](#). A well-documented if collateral by-product of the publication of a dictionary is that standardization can creep into language use as a consequence of certain forms being elevated and available for consultation in print form. For this reason, we find it relevant to explore how these publications grapple with dialectal variation within and across each language.

Given that there have been no living native speakers of Tunica for decades, the Tunica Language Project decided to adopt a more standardized language in order to reintroduce language production and use into the community. According to the publication, the dictionary was necessarily prepared using old texts and previous works by earlier academics, at the same time as adapting grammar and vocabulary to simplify learning and bring the language back with the goal of generating new users. Because dictionaries carry such weight and authority, this standardization was seen as an important and even necessary step to elevate the status of the language and stimulate further pedagogical efforts in the community.

The *DPP* identifies two Ponca tribes, one resident in Oklahoma and the other in Nebraska. While the majority of the lexicographical project focuses on the Oklahoma tribe, the authors assure the reader that there is insufficient variation within the Ponca speech community to justify representing differences in pronunciation and meaning held by

particular families or groups in the entries. For that reason, the dictionary assumes a standardized form of written Ponca, using an approachable vocabulary that contains clear and familiar definitions accessible by any speaker of Ponca (p. 7).

The Ngarinyman language, on the other hand, comprises three speech communities—Wurlayi (western), Yarralin and Timber Creek—each of which are clearly identified in the publication. The dictionary makes an explicit effort to represent and include all three language varieties, ensuring that when a word is typically used in one or more speech communities, the relevant dialectal information is identified in the usage section of the word entry.

The Yanyuwa language introduces a different form of variation, since the language boasts a women's dialect and a men's dialect, mainly marked by differences at the morphemic level. When applicable and appropriate, both forms are shown across all dictionary entries (with men's forms as the default, followed by women's forms), and the difference between these two gendered dialects is thoroughly explained in the grammatical section of the publication. Additionally, the *Yanyuwa Encyclopaedia* includes relevant remarks on sacred ceremonial language, avoidance or respectful language (usually when speaking to or near specific family members), island versus mainland words, and older word forms.

As outlined in the dictionary itself (p. vii), SENĆOŦEN is not a language per se, but rather a variety of Northern Straits. This language cluster includes other dialects such as Sooke, Songish, Lummi and Samish. According to Montler, only SENĆOŦEN and Samish can still count living first language speakers. Each dialect of Northern Straits has its own orthography and community-specific revitalization programs and, while the dialects are mutually intelligible, they are considered to be separate languages by the speech communities.

11. Funding and support

Creating lexicographic material for minoritized and under-documented languages is no small task. As Anderson (2020: 10) notes, 'dictionary creation is a time-consuming, resource-intensive process, yet broad groups such as language communities, academics, and funding organizations all agree that dictionaries are worthwhile investments'. All the publications analysed in this review article would not have been possible without considerable financial, social, and administrative support.

The DPP received financial support from the Indian Center, Inc., with the ANA (Administration for Native Americans) grant 'Community—Based Ponca Language Dictionary', and from the Endangered Language Fund (ELF), who also supported the Ponca Council of Elders (p. xii). In the case of the Yanyuwa volumes, funding was provided by the McArthur River Mine Community Benefits Trust, with additional support from Alison Doyle of the Mabunji Aboriginal Resource Association, the Yanyuwa li-Anthawirriyarra Sea Ranger, and li-Yanyuwa li-Wirdiwalangu (the Yanyuwa elders group) (p. iv).

The SENĆOŦEN dictionary project was funded by the Phillips Fund of the American Philosophical Society, the Jacobs Funds of the Whatcom Museum, the University of North Texas and the National Endowment for the Humanities (NEH). The dictionary itself is a product of a grant from the Documenting Endangered Languages Project managed by the NEH (p. vii).

The Ngarinyman dictionary mentions many different grants and funding bodies that supported the project in various ways, including covering the cost of trips, equipment,

personnel, accommodation, and fieldwork. The funding and general support came from: the Diwurruwurru-jaru Aboriginal Corporation, an Australian Research Council fellowship, the Australian Research Council Centre of Excellence for the Dynamics of Language, a DOBES (Documentation of Endangered Languages) grant and the Yarralin School (p. xi).

The American Philosophical Society provided funding for Anderson's dissertation, which resulted in the Tunica publication under review. The Tunica-Biloxi Tribe also sponsored Anderson's attendance at and participation in revitalization workshops in the region, and funded the Language and Culture Revitalization Program (LCRP) with the stated goal of revitalizing language and cultural practices. In 2018, the Tribe also won a multi-year grant from the Administration for Native Americans to fund the training of language apprentices who are destined to become the next generation of Tunica language teachers. Anderson helpfully includes a resource guide for the reader, listing a number of organizations that regularly provide funds for lexicography projects.

12. Conclusion

Each of the five publications under review in this comparative article are significant contributions to the field of Indigenous lexicography and dictionary making. While the approaches the authors and compilers have taken to their work vary widely, each project and publication situates ethical engagement and community participation at its core as these are key aspects of Indigenous language work. As will have become clear from this comparative review, lexicography for, by and with speakers of Indigenous languages is a space of great innovation and creativity, engaging with and challenging aspects of mainstream dictionary-making in ways that we find to be generative and inspiring.

Notes

1. 'The only remaining active users of the language are members of the grandparent generation and older.' – As described under Ethnologue Language Status ([Eberhard et al., 2021](#)).
2. Expanded Graded Intergenerational Disruption Scale.
3. 'The child-bearing generation can use the language among themselves, but it is not being transmitted to children.' – As described under Ethnologue Language Status ([Eberhard et al., 2021](#)).
4. 'The only remaining users of the language are members of the grandparent generation or older who have little opportunity to use the language.' – As described under Ethnologue Language Status ([Eberhard et al., 2021](#)).
5. 'The ethnic community associated with a dormant language is working to establish more uses and more users for the language with the results that new L2 speakers are emerging.' – As described under Ethnologue Language Status ([Eberhard et al., 2021](#)).
6. The term 'sketch grammar' is widely and variously used to describe different linguistic products. Mosel identifies at least five types of 'sketch grammar', the two most pertinent of which are 'the preliminary grammar that presents the very first account of a language's structure on the basis of a small corpus' and 'the grammar in the front matter of a dictionary (dictionary grammar)' ([2006](#): 301).
7. Kuhpani Yoyani Luhchi Yoroni (KYLY), a Tunica working group established to advance the projects of the Tunica Language Project.

8. FieldWorks Language Explorer.
9. Testimony retrieved from the back cover of the *Dictionary of the Ponca People* (Headman and O'Neill, 2019)
10. On sale; original price, 23.85USD. Retrieved January 17, 2022, from <https://www.amazon.com/Ngarinyman-English-Dictionary-Caroline-Jones-ebook/dp/B0821WBP6M>.
11. <http://saanich.montler.net/>. (Montler, n.d.)
12. <https://www.webonary.org/tunica/>. (Tunica-Biloxi Tribe of Louisiana, 2018)
13. OCAP[®] is a registered trademark of the First Nations Information Governance Centre (FNIGC).

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