

PERSPECTIVES

Understanding language vitality and reclamation as resilience: A framework for language endangerment and ‘loss’ (Commentary on Mufwene)

COLLEEN M. FITZGERALD

The University of Texas at Arlington

Drawing extensively from Indigenous scholarship, I argue for more holistic and inclusive notions of LANGUAGE and LANGUAGE VITALITY. This enables a better understanding of language revitalization’s role as a protective factor, as well as how to evaluate its success. I present data from the Indigenous communities of the United States and Canada showing that language shift correlates with a host of negative outcomes: educational, economic, and well-being. In contrast, language revitalization may confer protective effects, suggesting that it is better understood through RESILIENCE. A more holistic framework also provides an intellectually coherent integration of language revitalization, language documentation, and language itself.*

Keywords: language endangerment and loss, language revitalization, Indigenous communities, resilience, well-being outcomes, education

1. INTRODUCTION. Mufwene (2017) focuses on LANGUAGE ENDANGERMENT AND LOSS (LEL), arguing that ‘theoretical developments regarding language vitality lag far behind linguists’ current investment in language advocacy’ (p. e203) and outlining a set of factors that cause the shift and loss. In a valuable and timely way, Mufwene assesses the field regarding knowledge and theories of language endangerment. His target article and the various responses in this volume have the potential to frame research questions and agendas over the next decade. However, in my response, I counter some of his statements with arguments that there are, in fact, numerous linguists and grassroots scholars theorizing on language vitality and doing so in diverse venues,¹ and with increased attention to what constitutes a (possible) metric of vitality. I hope to show that any theorization of language vitality that fails to incorporate language revitalization is inherently flawed. The bulwark of this claim lies in the many and vibrant ways that communities engage with their language, even with only a few fluent speakers (e.g. Chew 2016, Davis 2016, Fitzgerald & Hinson 2016 on Chickasaw vitality in revitalization) or none (e.g. Hinton 2001, Leonard 2011, Baldwin et al. 2013, and Fitzgerald & Linn 2013 on revitalization through archival sources). Theories of language vitality are inadequate without addressing revitalization in these communities.

This paper outlines the elements of a resilience-based framework for language vitality and revitalization, rather than a deficit model of language shift. RESILIENCE is the ability to adapt and even thrive under adversity. Using a framework of resilience to understand language shift and LEL, I argue that language revitalization functions in an adaptive capacity and serves as a protective factor, as argued elsewhere regarding those strongly ensconced in traditional culture, language, and related activities (Zimmerman et al. 1998). Most importantly, this point draws upon significant scholarship from three key areas: Indigenous language revitalization (e.g. Meek 2010, Chew 2016, Leonard 2017), well-being outcomes in Indigenous communities (e.g. Hallett et al. 2007, Kir-

* This material is based upon work supported by and conducted while serving at the National Science Foundation. Any opinions, findings, and conclusions expressed in this material are those of the author, and do not necessarily reflect the views of the National Science Foundation. For helpful comments on an earlier draft, thanks go to Andries Coetzee, Ewa Czaykowska-Higgins, Keren Rice, Wesley Leonard, and Mary Linn.

¹ See, for example, the journals *Language Documentation & Conservation* (<http://nflrc.hawaii.edu/lde/>) and *Language Documentation and Description* (<http://www.elpublishing.org/publications>).

mayer et al. 2011), and educational policy implications of Indigenous immersion education (e.g. Romero Little & McCarty 2006, McCarty 2011).

In his essay, Mufwene asks, ‘is language shift as deleterious to the balance of human lives or to our social ecologies as, for instance, deforestation, poaching elephants, killing whales, and destroying corals in the ocean floor are to the equilibrium of our natural ecosystems?’² (p. e203). I present wide and varying evidence that indeed there is a plethora of outcomes showing that language shift can be deleterious. While there is no way to separate language shift from other losses like loss of land, culture, or sovereignty, whether in socioeconomic, educational, health, or other metrics, there is no evidence for widespread progress for Indigenous communities after colonization and genocide. Rather, research on language revitalization argues for the resilience of Indigenous communities, and that language revitalization functions as a protective factor for individuals and communities (Chandler & Lalonde 1998, 2008, McIvor et al. 2009, McIvor 2013, Oster et al. 2014, among others). This response thus draws on the correlation between beneficial outcomes and communities that are maintaining and reclaiming their languages, and conversely, detrimental effects for communities that have lost their languages. I show that the case for these relationships is strong, even if they do not imply causation. These arguments are based primarily on examples from the North American context, the United States and Canada, and are likely also true for Australia and New Zealand (see the literature cited by Whalen et al. 2016, Taff et al. 2018).

Mufwene raises questions about the causes of LEL, as well as the measures of vitality, whether benefits accrue in holding on to one’s language, and what constitutes success in language revitalization. I focus primarily on American Indians and Alaska Natives (AIAN) and Indigenous communities in Canada, a context of colonization and what many describe as genocide (Duran & Duran 1995; see also the Truth and Reconciliation Commission 2015 on ‘cultural genocide’). Because Mufwene brings up colonization at various points in his article, let us start with a shared set of definitions. Colonization is defined as ‘the action or process of settling among and establishing control over the indigenous people of an area’, ‘the action of appropriating a place or domain for one’s own use’, and in ecology ‘the action by a plant or animal of establishing itself in an area’.³ Understanding the context of colonization and trauma is part of the groundwork for understanding resilience.

First, one key cause of LEL that Mufwene mentions but, in my opinion, minimizes is the effect of residential or boarding schools. In §2, I address this topic more comprehensively because the literature is convincing regarding the traumatic and lingering experiences of residential schools, and shows that the trauma persists for children and grandchildren of survivors (i.e. Deacon et al. 2011), with significant documentation of the abuse rife in Canadian residential schools in the report of the Truth and Reconciliation Commission (2015).

Expanding upon Mufwene’s interrogation of the definition of languages as ‘systems or practices’, I delve into other, different conceptions of language, which reflect insights from practicing linguists and anthropologists, an increasingly diverse group. One

² The notion of ‘language shift’ is treated as unidirectional by Mufwene and elsewhere in the literature, a shift to a different, typically colonial or dominant, language. In many language revitalization contexts, there is a ‘reshift’ in communities back toward acquiring the Indigenous language.

³ <https://en.oxforddictionaries.com/definition/colonization>, accessed June 5, 2017.

such example comes from Indigenous linguist Lance Twitchell (2016:1):⁴ ‘The Tlingit Language is medicinal in its importance to Tlingit people’. More metaphorical definitions of language emerge in the language revitalization literature, often articulated by language practitioners, community elders, and Indigenous scholars (cf. Meek 2009, Leonard 2017). In §3, I discuss these conceptions and conclude that Mufwene’s probing of this issue is likely to be fruitful for the discipline.

These holistic and more inclusive conceptions of language lay the foundation to argue for a wider set of metrics and criteria of ‘success’ for revitalization in §4. This section incorporates work by Indigenous scholars who argue that a meaningful evaluation of success must incorporate notions of overall vitality and strength of the community, and not be limited to growth in the number of speakers or proficiency. Relatedly, a survey of the small but growing literature on the benefits of access to Indigenous heritage language bears directly on the question of whether language shift is adaptive or maladaptive. In §5, I turn to these findings, which illuminate how a community’s connection to language and culture positively affects well-being outcomes and how the absence of those factors might negatively correlate with well-being measures.

Considered together, these strands of scholarship minimally support the claim that language shift is not necessarily associated with positive outcomes and does not serve as a protective factor in contexts of colonization and trauma. That is the weak version of the claim. But the strong version of the claim is that in such contexts, it is language revitalization that is adaptive, associated with positive outcomes in the holistic sense—well-being, Indigenous sovereignty, educational success. The best framework for understanding Indigenous language vitality and reclamation is resilience-based, making revitalization clearly adaptive, when viewed with a wide and inclusive lens of the role language plays in Indigenous communities.

2. NATIONAL POLICIES AS CAUSES OF LANGUAGE LOSS. In this section, I outline the impact of US and Canadian federal policies that have had both direct and indirect effects in destabilizing and eliminating Native American languages. Current educational outcomes for Indigenous students, who typically enter schools speaking English, show that their academic progress trails far behind that of peers from other races. This raises the question of whether shift to English has been beneficial for Indigenous communities.⁵

Mufwene cites Leap (1993) for the claim that ‘the success of boarding schools in transforming Native American children into English-only speakers has been exaggerated’ in that vacations, for example, gave opportunities for children to use their native languages (p. e210). The record of testimony from boarding school survivors contradicts this, most dramatically in testimony from the Truth and Reconciliation Commission (2015). Lomawaima (1999:1) puts a larger historical frame on boarding school policies, starting at European contact in 1492, with four tenets of ‘colonial’ education:

- (1) that Native Americans were savages and had to be civilized;
- (2) that civilization required Christian conversion;
- (3) that civilization required subordination of Native communities, frequently achieved through resettlement efforts; and
- (4) that Native people had mental, moral, physical, or cultural deficiencies that made certain pedagogical methods necessary for their education.

⁴ Cited in Taff et al. 2018. Johnston (1999:51) quotes N. Scott Momaday, well-known Kiowa author, as expressing similar sentiments much earlier, suggesting that these notions have a longer use within Indigenous communities.

⁵ Obviously, it is challenging to isolate language shift as the or a key factor in areas where AIANs lag. Further below, I present findings by other researchers that (heritage) Indigenous language and culture appear to have a positive effect on well-being in Indigenous communities. While not conclusive, the two situations (negative outcomes where shift has occurred and positive outcomes where culture and language are retained) are consistent with language shift in these contexts as being maladaptive, in Mufwene’s terms, suggesting that further research would be insightful.

The Truth and Reconciliation Commission (2015:144) similarly notes assumptions about ‘the belief that Aboriginal children were incapable of attaining anything more than a rudimentary elementary-level or vocational education’. This larger context is critical for understanding the role of US and Canadian policies in LEL. Boarding schools in their historical context included the relocation and removal of Indian tribes. Prior to the American Civil War (1861–1865), the US federal government used military and legal force to resettle and relocate Native Americans, with perhaps the most (in)famous of these being the 1830 Indian Removal Act, which led to the Trail of Tears, the removal of a group of tribes from their aboriginal home in the Southeast to what is now known as Oklahoma. Following the Civil War, as the US government refocused away from military actions and conflicts, the Indian Peace Commission in 1868 reported:

Through sameness of language is produced sameness of sentiment, and thought; customs and habits are moulded and assimilated in the same way, and thus in process of time the differences producing trouble would have been gradually obliterated. By civilizing one tribe others would have followed. Indians of different tribes associate with each other on terms of equality; they have not the Bible, but their religion, which we call superstition, teaches them that the Great Spirit made us all. In the difference of language to-day lies two-thirds of our trouble. ... Schools should be established, which children should be required to attend; their barbarous dialects should be blotted out and the English language substituted. ... The object of greatest solicitude should be to break down the prejudices of tribe among the Indians; to blot out the boundary lines which divide them into distinct nations, and fuse them into one homogeneous mass. Uniformity of language will do this—nothing else will. (Report of Indian Peace Commissioners 1868)⁶

This sentiment of a deficit view of Indigenous culture and language is expressed throughout policy documents and by other federal commentary during the first half-century of US federal boarding schools. One of the earliest of these came as the Carlisle Barracks in Pennsylvania transformed into the Carlisle Indian Industrial School in 1879, and its founder, R. H. Pratt, instituted policies that forbade students from using their language and from traditional singing or dancing (Lomawaima 1994). Boarding school curriculum was more vocational and assimilatory than educational in nature, as seen in a contemporary newspaper account of the Chemawa Indian School in the Pacific Northwest:

The Anglo-Saxon race occupies this continent by the long-recognized right of conquest ... We have taken the land and converted it to our own use, because we are the stronger in numbers, in intellectual power, and in all those forces which enable one race to dominate another [p. 6] ... Nothing but English is spoken at the institution, and conversation in Indian tongues and the ubiquitous Chinook jargon is interdicted ... The half [of each grade] not attending school is employed in the shops, laundry, kitchen and on the farm. There is thus a daily division of labor and study, with ample time given to all for recreation ... Agriculture is, in the main, the most serviceable thing they [male students] can learn ... The pupils make all the shoes and boots worn by the two hundred children, do all the blacksmithing and iron work, all the carpenter work needed about the place ... The girls are taught laundry, cooking, sewing and housework in rotation ... in eleven months eight girls, working half a day, equal to the daily work of four girls, made two thousand and ninety-six pieces of clothing and bedding. [p. 10] (Author unknown 1887)

Likewise, Dauenhauer and Dauenhauer (1998:65) note that many Alaska Native elders who attended boarding schools have powerful memories of physical and mental abuse, quoting one as saying ‘Whenever I speak Tlingit, I can still taste the soap’. These educational policies had an expressed purpose to eliminate Native languages, to foster shift to English, and to assimilate Indigenous people not just in their language, but in religion, belief system, dress, and more. Firsthand interviews and records of residential school attendees and recollections of punishments and abuse are important in how they augment the historical record (i.e. Lomawaima 1994, Milloy 1999, Reyhner & Eder 2004, Truth and Reconciliation Commission 2015).

⁶ A search of the report finds seventeen uses of ‘barbarous’, ‘barbarism’, ‘barbarity’, and derivatives, giving a sense of the general tenor of the report.

Relevant to the question of whether language shift is adaptive (or retention and reshift is maladaptive) is the significant emerging literature on the trauma associated with boarding schools and with other negative effects from colonization for Indigenous people in the US and Canada. These losses and abusive experiences are argued to persist, known as HISTORICAL OR INTERGENERATIONAL TRAUMA (Duran & Duran 1995, Gone 2013, among many others). Boarding schools and their cumulative historical trauma constitute a larger role in LEL than acknowledged by Mufwene, and by proxy, by Leap (1993). In contrast, contemporary research into linguistic and cultural revitalization provides evidence for its potential to ameliorate physical and mental well-being (McIvor et al. 2009, McIvor 2013, Oster et al. 2014, *inter alia*), discussed in §5 as part of the costs of language shift.

To conclude this section, let us look at telling statistics for AIANs, estimated at 2.6% of the US population, with one-quarter of that population speaking a home language that is not English (United States Census Bureau 2016). Faircloth and Tippeconnic (2010) state that small populations like this mean the numbers indicating success or failure on an educational measure are often absent. Even so, statistics from the National Center for Education Statistics note American Indians have a lower high school graduation rate than other groups (National Center for Educational Statistics 2017) and a dropout rate that is twice the national average, around 30% (Reyhner 1991, cited in Faircloth & Tippeconnic 2010). Moreover, US and Canadian Indigenous students are ‘heavily overrepresented in special education and limited English proficient education tracks’, suggesting that tracking limits these students’ experiences and opportunities (McCarty 2016:46). Native Americans make up 2.6% of the population but earn fewer than 1% of all degrees, from the bachelor to master’s and doctoral degrees, a substantially lower rate compared to every other race and ethnicity (National Science Foundation 2017).⁷ Statistics from the US Census indicate that Native Americans face a poverty rate double the national rate and higher than other groups by race (United States Census Bureau 2016). In Canada, the Truth and Reconciliation Commission (2015:145) notes that ‘Aboriginal Canadians still have dramatically lower educational and economic achievements than other Canadians’. Language shift to the dominant English may not be a direct cause of these negative factors, but it is challenging to see these statistics and consider language shift adaptive.

‘Language is like the bones. Culture is like the body.’⁸

3. DEFINING ‘LANGUAGE’.⁹ Mufwene explores various conceptions of LANGUAGE, including as systems, communication practices, a communication tool, and perhaps a marker of ‘cultural singularity’. The quotation that begins this section offers one response to Mufwene’s question of how to define LANGUAGE in a way appropriate and relevant to language vitality. Its use of simile, as well as the use of metaphor elsewhere, is found fairly robustly in the literature. For example, Meek (2009:165) notes the use of movement metaphors to express the ‘dynamic or processual nature of language’ in First Nations communities, and her ethnography of language revitalization by the Kaska community in Canada is titled *We are our language* (Meek 2010), itself a metaphor.

⁷ Similarly low rates occur for Native Hawaiians and other Pacific Islanders.

⁸ http://www.ilinative.org/share/resources/2002_Lang_Symp_Summary_Notes.pdf, accessed January 19, 2015. The quotation comes from an unnamed participant discussing the relationship of culture to language learning at the 2002 Indigenous Language Institute Symposium in 2002. The symposium brought together grassroots language practitioners, community members, linguists, and educators and involved breakout sessions focusing on different aspects of language programs, such as vitality surveys and teacher training.

⁹ I owe an intellectual debt in this section to work being done by Wesley Leonard, especially Leonard 2017.

Leonard (2012:359) defines language reclamation as ‘a larger effort by a community to claim its right to speak a language and to set associated goals in response to community needs and perspectives’. While language revitalization may be conceptualized as geared toward acquisition and proficiency in second language learning, Leonard’s usage of *reclamation* provides a direct contrast through its orientation toward community goals. Fitzgerald 2017 notes that community members’ individual goals might be more oriented to activities like praying, singing lullabies, introducing oneself in the language, or using social media in the language, all more oriented toward contextualized language use. Child-rearing is another important goal; Daryl Baldwin learned and revived the sleeping¹⁰ language Myaamia in large part by family use at home (Baldwin et al. 2013). Rice (2011) notes that language revitalization is often situated in even broader goals, like leadership or capacity building in the community. Other goals indirectly rely on the acquisition of grammatical information, such as conversing, but the goals themselves remain oriented around social practice and language use in context. On the flip side, in language documentation and linguistic fieldwork, language consultants often find paradigms and detailed grammatical queries boring and repetitive. Second language acquisition theory shows another parallel, where instruction focused on more meaningful or communicative uses of grammatical forms seems more effective than teaching decontextualized forms (cf. Norris & Ortega 2000).

In more recent work, Leonard (2017:22–23) draws from interviews with Indigenous community members engaged in reclamation and presents a compelling set of their different definitions and ideologies of language, which range from communication, to spiritual and political, but not the typical ‘structural or cognitive notions that are common in Linguistics’. He argues that:

As a broader approach than revitalisation, reclamation more strongly links language work with the underlying causes of language shift. Reclamation likewise recognises that in certain worldviews, what in Western science would be considered social factors that are merely associated with language might instead be part of what someone understands ‘language’ to be. (Leonard 2017:19–20)

The literature elsewhere also argues for alternative and broader conceptions of LANGUAGE. For instance, Nicholas (2008) analyzes her interviews with Hopi youth, their parents, and grandparents to show how language is conceptualized in a larger context, inseparable from cultural practice and knowledge, transmitted through the Hopi oral tradition. Using interviews with Chickasaw elders and learners, Chew (2016:217) observes that ‘Chickasaw people are working not to simply stabilize or renew language, but our own sense of integrity and humanity’. Counciller, in her dissertation on Alutiiq revitalization in Alaska, quotes an unidentified elder from her community: ‘To me it’s healing. This language is healing to me’ (Counciller 2010:179). Likewise from the Canadian context, Rosborough (2012:141–42) notes that Kwak’wala language ‘connects us to the spirit of our people and makes us who we are’.

These organic, all-encompassing, and holistic views of language place it at the center of well-being, culture, and social structures, and what it means to be human. Contrast it with the ‘systematic means of communicating ideas or feelings by use of conventionalized signs’.¹¹ The latter definition even seems detrimental:

the modern notion of languages as homogenous, stable ‘things’ that are taught, learned and used—a concept deeply embedded in the grammar of Western languages and in linguistic theory—is fatal to the goal of revitalizing indigenous language. (Fettes 1997:302)

¹⁰ I use ‘sleeping’ (rather than ‘extinct’) following Leonard 2011:142.

¹¹ <https://www.merriam-webster.com/>, accessed June 1, 2017.

If language reclamation in Leonard's (2011, 2012, 2017) sense is viewed as a broader restoration of this humanity and well-being, as medicine, then a less inclusive definition of language will be in disharmony with Indigenous communities where more comprehensive notions abide. One might even impeach the less inclusive definition as prescriptivist and as also reflecting its own distinct ideology. That is the critique of Western notions, that they themselves reflect a bias and do not allow that other perspectives might exist or have validity (e.g. Smith 2012). Understanding this critique requires recognizing that a different literature exists, expressing distinct perspectives, and that these resources are essential to constructing an assessment of revitalization.

Introducing definitions that directly relate to understanding linguistic vitality in the LEL literature suggests some answers to how linguistics has benefited, a question Mufwene has with regard to Hale and colleagues' (1992) papers on language loss. One benefit is a broader, holistic, and more functional notion of language. Next, in §4, I explore what constitutes success in language revitalization, laying the foundation to then address the costs of language shift.

‘the standard of measurement should not reflect education standards but a more Indigenous standard. For example, what is needed to be a good hunter? Standards should meet the needs of the local community.’ (American Indian Language Development Institute 2016)¹²

4. METRICS OF VITALITY AND SUCCESS IN LANGUAGE REVITALIZATION. Mufwene's critique of language revitalization as basically unsuccessful can at best be characterized as a fallacy. It rests on an incorrect assumption that the only way in which language revitalization can be assessed as a success is through the existence of newly created speakers of the heritage language.¹³ That metric of success seems to be the only logical outcome when using a narrow, decontextualized definition of language. After all, what is language other than its structure and its communicative capabilities?

The fallacy of unsuccessful language revitalization is vigorously argued against by Leonard (2011) as he responds to the following quotation from a blogpost: ‘I give the revival of the Myaamia language a 1% chance of being successful and that is being optimistic’.¹⁴ Relevant to Mufwene's critique is Leonard's response because it incorporates several avenues of argumentation, including that it is inappropriate to judge revitalization efforts against the standards of what counts as success for learning a major language like English or Spanish and that such a judgment does not take into consideration current community goals, such as enabling Miami youth to develop an identity that reflects awareness of and connection to the larger community, among other goals. In fact, Leonard (2011) specifies a goal, identity formation, that is later reinforced by a longitudinal study by Mosley-Howard and colleagues (2015). The study showed higher retention and graduation rates for Miami tribal students who take a series of Myaamia language and culture courses while enrolled in undergraduate study at Miami University (Ohio), a predominantly white institution.¹⁵ These higher rates are suggestive of success and contrast with the dramatic statistics on educational disparities between Native Americans and other groups cited earlier.

¹² http://aildi.arizona.edu/language_summit2016, accessed March 28, 2017. This is also the source for the toolkit in 1 below.

¹³ This is extrapolated from the two cases of success that Mufwene cites (French in Quebec and Afrikaans in South Africa), but I do not believe he directly defines what constitutes success.

¹⁴ http://thelanguageguy.blogspot.com/2007_02_01_archive.html, accessed June 1, 2017.

¹⁵ Mosley-Howard and colleagues (2015) note limitations of this study, including small sample size and statistical power and a focus on a single tribe.

An understanding of what constitutes ‘success’ for language revitalization and reclamation will face challenges and be disharmonious when outsiders’ ideas, rather than community goals, determine whether Indigenous language reclamation has been successful. At a 2016 convening, the American Indian Language Development Institute (AILDI) posed five questions, given in 1, to collaboratively develop a toolkit to support the transmission and survival of Indigenous language, culture, and traditional knowledge.

(1) The Indigenous languages survival kit

- a. What is internalized colonialism and how does it manifest in your language program?
- b. What does commitment have to do with language revitalization?
- c. How do you navigate local politics surrounding language?
- d. How does a tribal community define successful language learning?
- e. How do we talk about language (with youth/within the community/with other agencies and organizations)?

Similar issues are found in Czaykowska-Higgins et al. 2017 regarding Indigenous language proficiency teaching and training programs at the University of Victoria in Canada. These approaches reinforce some of the discussions from the previous section, such as a holistic and encompassing view of language and valorization of language learners’ progress, not merely attainment of fluency. Notions of success are not focused on acquiring decontextualized grammatical structures, on attaining high levels of fluency, or on a return to widespread intergenerational transmission in the home. The issues are framed locally, at the community level, and only in the last question does the outside world come into play.

Determining the success or failure of language revitalization will be reductionist (and inadequate) insofar as it only looks at number of speakers and performance on an idealized version of the Indigenous language. The Myaamia context is different from the Chickasaw which is different from the Hopi and so on. Moreover, many revitalization contexts lead to results that suggest other kinds of success. McCarty and colleagues (1997) note that decades of Native language revitalization at AILDI have resulted in orthographies, mother language materials, increased parental involvement in children’s Indigenous language and English literacy, tribal and federal policy advocacy, and credentialing of Indigenous language-speaking educators.

Another example from Guatemala consists of development efforts to address health disparities by providing support for provider training and healthcare in Indigenous languages (Henderson et al. 2014:89), a point made by Rice (2011) for Canada. These efforts subordinate language revitalization to remediate other disparities that cause language shift. And yet, this might not be language revitalization as traditionally conceived, where language learning is preminent.

This section sought to highlight the problematic dimensions of the assumption that language revitalization can be evaluated in terms of its success when that is determined either simply by focusing on the numbers (i.e. how many new speakers), by simply comparing the acquisition and production of learners’ language to the language of fluent speakers in the pre-shift era, or by using some other criteria independent from local community goals. Defining success for language revitalization in a holistic way encompasses a higher quality of life and better outcomes in health and education, and resonates with findings that maintenance and revitalization of endangered heritage languages have benefits. It also supports the argument that language shift has been part of a negative process for the Indigenous communities of the US and Canada.

‘A strong Chickasaw family would include: lost traditions, ceremonies and activities being restored ... the Chickasaw language [being] prevalent ...’ (Deacon et al. 2011:51)

5. UNDERSTANDING THE BENEFITS OF REVITALIZATION. Again, a more holistic notion of language is expressed in this quotation, and it reinforces the idea that maintenance and revitalization of the language is essential to well-being in the community. This conception of the essential role of language and culture in well-being leads into two questions that Mufwene asks about language shift, that is, whether preventing shift would be more adaptive, and whether language shift is ‘necessarily maladaptive’ (p. e209). In this section, I examine two areas that provide insight into part of the answer: well-being and educational outcomes for the Indigenous communities of the US and Canada. Evidence that connections to language and culture have a positive influence on these outcomes comes from endangered language communities where shift is happening but language revitalization or maintenance activities are ongoing. In other words, language reshift is the locus of positive outcomes.

Well-being subsumes physical and mental health. McIvor and colleagues (2009), among others, note that in Native communities, it also extends to emotional and spiritual dimensions. Recall from §2 above that Native Americans face disparities in higher dropout rates, fewer earned degrees, higher levels of poverty, more placements in special education, and so on. Similar disparities also occur for physical health. Newlin Hutchinson and Shin (2014:6–7) analyze fifteen years of health studies to show that ‘across a broad spectrum of chronic conditions, AI/ANs have disproportionately high rates of health problems and potentially higher rates of mortality from these conditions’.

Additional disparities exist in mental health. Gone and Trimble (2012) show that US Indigenous communities have higher rates of substance abuse, violence, suicide, and post-traumatic stress disorder compared with other races and ethnicities. Elsewhere, Bachman and colleagues (2010) show that AIAN women face higher rates of rape and sexual assault as compared to women of other ethnic and racial groups, including more injuries resulting from these attacks (evidenced by the need for medical attention), and with fewer arrests for their assailants. See the report of the Truth and Reconciliation Commission 2015 for similar examples for Indigenous women in Canada.

Language shift in Native communities reflects just one dimension of loss under colonization. But extensive evidence of multiple disparities exists, showing how language shift and colonization more generally have not proven to be positive for Indigenous people in North America. Is this a direct argument that language shift is necessarily maladaptive? Perhaps not, but clearly language shift in the context of colonialism and historical trauma accrues no positive economic, health, or educational benefits, even when other types of populations experience benefits from shifting to a majority or dominant language, and even when the colonized and colonizers both believe that language shift increases economic and other benefits.

Notwithstanding the litany of negative outcomes recounted in this section and earlier ones, the resilience of Native communities in the face of this historical trauma is admirable and impressive. Relatively recent areas of research in language vitality argue that language maintenance and revitalization activities do seem to correlate with positive health outcomes, and with resilience in some studies.

For example, Chandler and Lalonde (1998) examined suicide rates among First Nations youth in British Columbia, Canada, to see how they correlated with six factors of CULTURAL CONTINUITY, which included administering their own tribal education system for K–12, tribal self-government, and the presence of communal cultural facilities, among others. Communities with one or more of these factors suffered lower youth sui-

cide rates than those that had none, and as communities increased the number of cultural continuity factors they possessed, the suicide rate in those communities decreased, with each additional cultural factor resulting in a corresponding decrease in suicides (cf. figure 6 in Chandler & Lalonde 1998).

Hallett and colleagues (2007) dive deeper into this, bringing language into the picture and showing that the suicide rate in communities differed markedly based on what proportion of its members self-identify as speakers of the Indigenous language. When a minority of the members knew the language, communities suffered a suicide rate six times that of communities where language usage was 50% or higher.¹⁶ In their analysis, language served as a protective factor in these majority-language communities, with the protectiveness increasing even more in conjunction with the other cultural continuity factors.

The relationship that communities have with language requires a model that incorporates grief over language loss. It also means understanding the complex and interconnected factors that Zimmerman and colleagues (1998:199) define as *ENCULTURATION*: ‘the extent to which individuals identify with their ethnic culture, feel a sense of pride for their cultural heritage’ and the degree to which the traditional and cultural practices are embedded into quotidian activities. Whitbeck and colleagues (2004a) conceptualize *HISTORICAL LOSS* (akin to historical trauma, discussed earlier) through focus groups with Native American elders, parents, and community advisory groups. Their interviews led to the twelve items constituting the *HISTORICAL LOSS SCALE* given in 2; ‘[f]oremost among the cultural losses mentioned was the loss of their language’ (Whitbeck et al. 2004a:122). In fact, participants thought about the loss of their language daily or even more. Together, enculturation and historical loss function as opposing forces or factors.

- (2) Elements in the historical loss scale (Whitbeck et al. 2004a:128)
 - a. Loss of our land
 - b. Loss of our language
 - c. Losing our traditional spiritual ways
 - d. The loss of our family ties because of boarding schools
 - e. The loss of families from the reservation to government relocation
 - f. The loss of self-respect from poor treatment by government officials
 - g. The loss of trust in whites from broken treaties
 - h. Losing our culture
 - i. The losses from the effects of alcoholism on our people
 - j. Loss of respect by our children and grandchildren for elders
 - k. Loss of our people through early death
 - l. Loss of respect by our children for traditional ways

Similarly, the analysis of alcohol abuse by Whitbeck and colleagues (2004b) finds a correlation with historical loss; they also find that enculturation (including language) can carry some protective dimensions. Regarding diabetes rates, Oster and colleagues (2014) demonstrate that cultural continuity serves as a protective effect; they found lower diabetes rates in the First Nations communities they examined where Indigenous culture and language have been retained. More recently, Jenni and colleagues (2017) examined themes expressed by Canadian Indigenous participants in adult immersion

¹⁶ The Canadian census formed the basis for determining language estimates in Hallett et al. 2007.

(master-apprentice) programs, which repeatedly invoked individual and community well-being and health outcomes as effects of participation.

As for educational outcomes, a substantial literature on Indigenous language immersion supports stronger academic performance by students in a range of areas, including nonacademic ones (Romero Little & McCarty 2006, McCarty 2011, McCarty & Lee 2014, Iokepa-Guerrero 2016).¹⁷ A meta-analysis of immersion school data from Native Hawaiian, Blackfeet, Navajo, and Pueblo communities conducted by Romero Little and McCarty (2006) found a range of positive benefits, from restoration of language to tribal sovereignty and equity, among others, as in 3. In fact, the immersion study findings are almost like a mirror image of the historical loss scale from 2. Using more holistic assessment factors (i.e. beyond fluency and number of speakers), immersion correlates with fewer historical loss factors and an increase in cultural continuity and enculturation, to draw from concepts discussed above.

- (3) Indigenous language immersion findings (Romero Little & McCarty 2006: 24–27)
 - a. Alternative routes to English proficiency are effective.
 - b. Time spent learning the heritage language does not impede English language learning and in general, has salutary academic effects.
 - c. Acquiring a heritage language as a second language takes several years.
 - d. Heritage language immersion programs strengthen relationships between children, adults, and the community.
 - e. The transfer of literacy abilities is complex.
 - f. Additive bilingualism enhances achievement and equity.
 - g. The success of LPP [language planning and policy] efforts in these cases and others is integrally tied to tribal sovereignty.

The Hawaiian language is an oft-cited example of successful language revitalization, and there is now considerable educational data on these efforts. Iokepa-Guerrero (2016: 574) notes that the Native Hawaiian immersion school Nāwahīokalani‘ōpu‘u serves preschool to twelfth-grade students in the Hawaiian language and boasts of ‘a 15-year record of 100 percent high school graduation and an 80 percent college attendance rate’. Recall the educational disparities for Indigenous students discussed in §2. The Hawaiian success rates constitute a strong argument that language revitalization is adaptive and indicative of resilience. If the boarding schools of the previous two centuries constitute colonization, then immersion education sees the pendulum shift to tribal sovereignty. In the health studies reviewed earlier in this section, loss of land and tribal sovereignty were associated with negative well-being outcomes, while greater tribal sovereignty served as a resilience factor. Iokepa-Guerrero augments the findings in 3 with research showing that language revitalization programs benefit the social, emotional, and cognitive development of children, as well as community development, leadership, and an increase in Indigenous language materials through media and technology.

Importantly, none of these findings measure or assess fluency in the Indigenous language. While McCarty (2011:14) notes that four to seven years are needed ‘to develop age-appropriate academic proficiency in a lesser-used language’, she demonstrates that one positive outcome of attending what she calls ‘strong’ Indigenous language immersion schools is equivalent or even higher academic performance as compared to their peers enrolled elsewhere. Defining the sole goal in language revitalization as fluency

¹⁷ See also Child Language Research and Revitalization Working Group 2017, which surveys the impact of documentation on child learners.

ignores the many benefits seen in education and well-being, and the restorative and protective role it plays in countering historical trauma. Similarly, the AILDI indigenous language survival toolkit from 1 also proposes action steps like becoming a role model and a leader and encouraging new and emerging speakers, for example, focusing on actions that cultivate strength, adaptability, and resilience.

To summarize, the findings presented in this section draw from well-being and educational outcomes to argue that potential improvements on the public-health front ideally should integrate language and culture, and that a holistic view of the role of language and culture might give a better perspective on the benefits of language maintenance and revitalization. Language revitalization reflects resilience, with the evidence showing that it is associated with the reduction of disparities in education and health for Native Americans. Reduced disparities argue for language revitalization as adaptive, and for language shift as maladaptive. Language shift is a historical loss and thus functions as a risk factor for the Indigenous communities as outlined above.

6. CONCLUSION. Mufwene's article provides a timely opportunity to assess where the discipline is a quarter-century after Hale and colleagues (1992) demanded urgent action in response to language endangerment. I would argue that linguistics has indeed made significant advances in theory and in practice. Regarding the former, a new subfield of linguistics, language documentation, has emerged. Himmelmann (1998:166) defines language documentation as 'the record of the linguistic practices and traditions of a speech community ... [and] may include a description of the language system'. A holistic understanding of language as contextualized language, not simply grammars and dictionaries, is consistent with the Indigenous notions of language explored in §3 and the metrics of vitality and success for revitalization discussed in §4.

Regarding practice, an estimated 7,000 languages worldwide means insufficient numbers of linguists. However, it is local community members whose proximity makes them the most likely to act. Training can enable community members to develop appropriate responses. In fact, Hale and colleagues (1992) outlined the important role played by training. Specifically, Watahomigie and Yamamoto (1992) outline the founding of AILDI in 1978, a major force in training Native American language practitioners and linguists (McCarty et al. 1997). AILDI has generated offspring like the Northwest Indian Language Institute (NILI) at the University of Oregon and the Canadian Indigenous Languages and Literacy Development Institute (CILLDI) at the University of Alberta. These grassroots institutes play a vital role for Indigenous community members in cultivating language vitality. England (1992) makes a similar case in Guatemala, where the training of linguists who are native speakers of Mayan languages has led to rich contributions that integrate documentation, linguistic analysis, educational policy, and revitalization and maintenance (England 2003, 2007). Successful, sustainable, long-term training venues also exist in the absence of fluent first-language speakers of a language, as evidenced by the Breath of Life archival model for sleeping languages, first used in California (Hinton 2001, Gehr 2013) and later in Oklahoma (Fitzgerald & Linn 2013) and nationally (Sammons & Leonard 2015).

These models have been extended and increasingly occur internationally. For example, in 2008, CoLang, the Institute on Collaborative Language Research, was established to build capacity in minority and endangered language communities and to enhance documentary and field training for linguists.¹⁸ Nash (2017) describes the im-

¹⁸ <http://www.uta.edu/faculty/cmfitz/swnal/projects/CoLang>, accessed January 1, 2014.

pact from a 2008 field methods class on Ekegusii for the speakers from Kenya as well as the students. Yamada (2014) gives similar examples for Kari'ña, a Suriname language. Training has also been argued to be in a feedback loop with documentation, revitalization, and linguistic analysis, enhancing the work produced in each stage (Fitzgerald & Hinson 2013, 2016, Fitzgerald 2018). A theory of language vitality must incorporate the kind of evidence gleaned from training, such as the vigorous interest by communities whose languages are sleeping.

In this example and throughout my response, I have presented the substantial efforts made by linguists and minority and endangered language communities to better understand and respond to language shift and LEL. I have drawn upon and synthesized an extensive literature from at least two decades of work in education, language revitalization, Indigenous studies, and well-being that gives new insight into language vitality and resilience. This literature, especially on well-being, also leads to a greater understanding of the interconnected role that language plays in public health and education and more. Ultimately, I would argue that there is abundant reason for considering language shift to be maladaptive, at least for Indigenous communities in the US and Canada, and likely Australia and New Zealand.

The primary goals of this response have been fourfold. First, I argued that the notions of LANGUAGE and LANGUAGE VITALITY are incomplete and inadequate as currently conceived. Second, using these incomplete and inadequate definitions creates little room for understanding the functional and protective role of language revitalization. I would argue that a theory of language vitality must incorporate revitalization. Third, when evaluated in a framework that uses more inclusive notions of vitality and language, evidence from Indigenous communities in the US and Canada shows that language revitalization is successful and may even reverse negative outcomes from historical loss and trauma. Fourth, language revitalization and reclamation act as a protective factor and convey resilience on communities where significant disparities otherwise exist.

Drawing from the context of community-based language research, Czaykowska-Higgins (2009:38) notes that 'linguist-focused language research as a research model idealizes abstention from action and excuses accountability precisely because in its most idealized form, it tries to ignore the context in which it takes place'. Responding to this, I have tried to show that contextualized and holistic notions of language use as articulated by Indigenous communities and in Indigenous scholarship can change the framework for evaluating and understanding vitality and language revitalization. The perspectives and voices of Indigenous and minority language scholars can in turn raise consciousness of how Western notions, methods, constructs, and research are privileged (e.g. Smith 2012), including in the realm of linguistics (Rice 2006, Czaykowska-Higgins 2009, Leonard & Haynes 2010, Leonard 2011, 2012, 2017, Fitzgerald & Hinson 2013, Chew et al. 2015, and others). Creating space for these diverse perspectives and scholarship can also create a more inclusive space for Indigenous linguists, thus broadening participation and further increasing educational outcomes for Indigenous people and advancing the language sciences.

REFERENCES.

- AUTHOR UNKNOWN. 1887. The Indian School at Chemawa. *The West Shore* 13(1).5–12. Portland, OR: Digital Collections, University of Washington Libraries. Online: <http://digitalcollections.lib.washington.edu/cdm/ref/collection/lctext/id/1540>, accessed May 31, 2017.
- BACHMAN, RONET; HEATHER ZAYKOWSKI; CHRISTINA LANIER; MARGARITA POTEYEVA; and RACHEL KALLMYER. 2010. Estimating the magnitude of rape and sexual assault against

- American Indian and Alaska Native (AIAN) women. *Australian & New Zealand Journal of Criminology* 43.199–222. DOI: 10.1375/acri.43.2.199.
- BALDWIN, DARYL; KAREN BALDWIN; JESSIE BALDWIN; and JARRID BALDWIN. 2013. Myaamiaataweenki oowaaha: Miami spoken here. *Bringing our languages home: Language revitalization for families*, ed. by Leanne Hinton, 3–18. Berkeley, CA: Heyday Books.
- CHANDLER, MICHAEL J., and CHRISTOPHER E. LALONDE. 1998. Cultural continuity as a hedge against suicide in Canada's First Nations. *Transcultural Psychiatry* 35.191–219. DOI: 10.1177/136346159803500202.
- CHANDLER, MICHAEL J., and CHRISTOPHER E. LALONDE. 2008. Cultural continuity as a protective factor against suicide in First Nations youth. *Horizons* (Special issue: *Aboriginal youth, hope or heartbreak: Aboriginal youth and Canada's future*) 10.68–72.
- CHEW, KARI A. B. 2016. *Chikashshanompa 'Ilanompohóli Biyyi'ka'chi [We will always speak the Chickasaw language]: Considering the vitality and efficacy of Chickasaw language reclamation*. Tucson: University of Arizona dissertation. Online: <http://hdl.handle.net/10150/621788>.
- CHEW, KARI A. B.; NITANA HICKS GREENDEER; and CAITLIN KELIAA. 2015. Claiming space: An autoethnographic study of Indigenous graduate students engaged in language reclamation. *International Journal of Multicultural Education* 17.73–91. DOI: 10.18251/ijme.v17i2.966.
- CHILD LANGUAGE RESEARCH AND REVITALIZATION WORKING GROUP. 2017. Language documentation, revitalization, and reclamation: Supporting young learners and their communities. Waltham, MA: EDC. Online: <http://www.edc.org/language-documentation-revitalization-and-reclamation>, accessed May 27, 2017.
- CORONEL-MOLINA, SERAFÍN M., and TERESA L. MCCARTY (eds.) 2016. *Indigenous language revitalization in the Americas*. New York: Routledge.
- COUNCELLER, APRIL LAKTONEN. 2010. *Niugnelyukut (We are making new words): A community philosophy of language revitalization*. Fairbanks: University of Alaska Fairbanks dissertation.
- CZAYKOWSKA-HIGGINS, EWA. 2009. Research models, community engagement, and linguistic fieldwork: Reflections on working within Canadian Indigenous communities. *Language Documentation & Conservation* 3.15–50. Online: <http://hdl.handle.net/10125/4423>.
- CZAYKOWSKA-HIGGINS, EWA; STRANG BURTON; ONOWA MCIVOR; and ALIKI MARINAKIS. 2017. Supporting Indigenous language revitalisation through collaborative post-secondary proficiency-building curriculum. *Language Documentation and Description* 14.136–59. Online: <http://www.ejournals.org/PID/155>.
- DAUENHAUER, NORA M., and RICHARD DAUENHAUER. 1998. Technical, emotional, and ideological issues in reversing language shift: Examples from Southeast Alaska. *Endangered languages: Current issues and future prospects*, ed. by Lenore A. Grenoble and Lindsay J. Whaley, 57–98. New York: Cambridge University Press.
- DAVIS, JENNY L. 2016. Language affiliation and ethnolinguistic identity in Chickasaw language revitalization. *Language & Communication* 47.100–111. DOI: 10.1016/j.langcom.2015.04.005.
- DEACON, ZERMARIE; JOY PENDLEY; WAYMON R. HINSON; and JOSHUA D. HINSON. 2011. Chokka-chaffa'kilimpi', Chikashshiyakni'kilimpi': Strong family, strong nation. *American Indian and Alaska Native Mental Health Research* 18(2).41–63. DOI: 10.5820/aian.1802.2011.41.
- DURAN, EDUARDO, and BONNIE DURAN. 1995. *Native American postcolonial psychology*. Albany: SUNY Press.
- ENGLAND, NORA C. 1992. Doing Mayan linguistics in Guatemala. *Language* 68.29–35. DOI: 10.1353/lan.1992.0073.
- ENGLAND, NORA C. 2003. Mayan language revival and revitalization politics: Linguists and linguistic ideologies. *American Anthropologist* 105.733–43. DOI: 10.1525/aa.2003.105.4.733.
- ENGLAND, NORA C. 2007. The influence of Mayan-speaking linguists on the state of Mayan linguistics. *Endangered languages*, ed. by Peter K. Austin and Andrew Simpson, 93–111. Berlin: Helmut Buske.
- FAIRCLOTH, SUSAN C., and JOHN TIPPECONNIC. 2010. *The dropout/graduation rate crisis among American Indian and Alaska Native students: Failure to respond places the fu-*

- ture of Native peoples at risk*. Los Angeles, CA: The Civil Rights Project/Proyecto Derechos Civiles at UCLA. Online: <https://www.civilrightsproject.ucla.edu/research/k-12-education/school-dropouts/the-dropout-graduation-crisis-among-american-indian-and-alaska-native-students-failure-to-respond-places-the-future-of-native-peoples-at-risk>, accessed June 6, 2017.
- FETTES, MARK. 1997. Stabilizing what? An ecological approach to language renewal. In Reyhner 1997, 301–18.
- FITZGERALD, COLLEEN M. 2017. The sounds of Indigenous language revitalization. Invited plenary address at the annual meeting of the Linguistic Society of America, Austin, TX. Video online: www.youtube.com/watch?v=wrPe_6KdoOo&list=PLc4TBef_CiuoklawF2lrXL2q6vyP4IIs7, accessed February 3, 2017.
- FITZGERALD, COLLEEN M. 2018. Creating sustainable models of language documentation and revitalization. *Insights from practices in community-based research*, ed. by Shannon T. Bischoff and Carmen Jany. Berlin: De Gruyter Mouton, to appear.
- FITZGERALD, COLLEEN M., and JOSHUA D. HINSON. 2013. 'Ilittibatoksali 'We work together': Perspectives on our Chickasaw tribal-academic collaboration. In Norris et al., 53–60.
- FITZGERALD, COLLEEN M., and JOSHUA D. HINSON. 2016. Collecting texts in endangered languages: The Chickasaw narrative bootcamp. *Language Documentation & Conservation* 10.522–47. Online: <http://hdl.handle.net/10125/24717>.
- FITZGERALD, COLLEEN M., and MARY S. LINN. 2013. Training communities, training graduate students: The 2012 Oklahoma Breath of Life Workshop. *Language Documentation & Conservation* 7.252–73. Online: <http://hdl.handle.net/10125/4596>.
- GEHR, SUSAN. 2013. Breath of life: Revitalizing California's native languages through archives. San José, CA: San José State University master's thesis. Online: http://scholarworks.sjsu.edu/etd_theses/4386.
- GONE, JOSEPH P. 2013. Redressing First Nations historical trauma: Theorizing mechanisms for indigenous culture as mental health treatment. *Transcultural Psychiatry* 50.683–706. DOI: 10.1177/1363461513487669.
- GONE, JOSEPH P., and JOSEPH E. TRIMBLE. 2012. American Indian and Alaska Native mental health: Diverse perspectives on enduring disparities. *Annual Review of Clinical Psychology* 8.131–60. DOI: 10.1146/annurev-clinpsy-032511-143127.
- HALE, KEN; MICHAEL KRAUSS; LUCILLE J. WATAHOMIGIE; AKIRA Y. YAMAMOTO; COLETTE CRAIG; LAVERNE MASAYESVA JEANNE; and NORA C. ENGLAND. 1992. Endangered languages. *Language* 68(1).1–42. DOI: 10.2307/416368.
- HALLETT, DARCY; MICHAEL J. CHANDLER; and CHRISTOPHER E. LALONDE. 2007. Aboriginal language knowledge and youth suicide. *Cognitive Development* 22.392–99. DOI: 10.1016/j.cogdev.2007.02.001.
- HINTON, LEANNE. 2001. The use of linguistic archives in language revitalization. *The green book of language revitalization*, ed. by Leanne Hinton and Kenneth Hale, 419–23. San Diego: Academic Press.
- HENDERSON, BRENT; PETER ROHLOFF; and ROBERT HENDERSON. 2014. More than words: Towards a development-based approach to language revitalization. *Language Documentation & Conservation* 8.75–91. Online: <http://hdl.handle.net/10125/4611>.
- HIMMELMANN, NIKOLAUS P. 1998. Documentary and descriptive linguistics. *Linguistics* 36.161–95. DOI: 10.1515/ling.1998.36.1.161.
- IOKEPA-GUERRERO, NOELANI. 2016. Revitalization programs and impacts in the USA and Canada. In Coronel-Molina & McCarty, 554–603.
- JENNI, BARBARA; ADAR ANISMAN; ONOWA MCVIVOR; and PETER JACOBS. 2017. An exploration of the effects of mentor-apprentice programs on mentors' and apprentices' wellbeing. *International Journal of Indigenous Health* 12.25–42. DOI: 10.18357/ijih122201717783.
- JOHNSTON, BASIL. 1999. How do we learn? What do we learn? *Talking on the page: Editing Aboriginal oral texts*, ed. by Laura J. Murray and Keren Rice, 43–52. Toronto: University of Toronto Press.
- KIRMAYER, LAURENCE J.; STÉPHANE DANDENEAU; ELIZABETH MARSHALL; MORGAN KAHENTONNI PHILLIPS; and KARLA JESSEN WILLIAMSON. 2011. Rethinking resilience from indigenous perspectives. *The Canadian Journal of Psychiatry* 56.84–91. DOI: 10.1177/070674371105600203.
- LEAP, WILLIAM L. 1993. *American Indian English*. Salt Lake City: University of Utah Press.

- LEONARD, WESLEY Y. 2011. Challenging 'extinction' through modern Miami language practices. *American Indian Culture and Research Journal* 35.135–60. DOI: 10.17953/aicr.35.2.f3r173r46m261844.
- LEONARD, WESLEY Y. 2012. Reframing language reclamation programmes for everybody's empowerment. *Gender and Language* 6.339–67. DOI: 10.1558/genl.v6i2.339.
- LEONARD, WESLEY Y. 2017. Producing language reclamation by decolonising 'language'. *Language Documentation and Description* (Special issue on reclaiming languages) 14. 15–36. Online: <http://www.elpublishing.org/PID/150>.
- LEONARD, WESLEY Y., and ERIN HAYNES. 2010. Making 'collaboration' collaborative: An examination of perspectives that frame linguistic field research. *Language Documentation & Conservation* 4.268–93. Online: <http://hdl.handle.net/10125/4482>.
- LOMAWAIMA, K. TSIANINA. 1994. *They called it prairie light: The story of Chilocco Indian school*. Lincoln: University of Nebraska Press.
- LOMAWAIMA, K. TSIANINA. 1999. The unnatural history of American Indian education. *Next steps: Research and practice to advance Indian education*, ed. by Karen Cayton Swisher and John Tippeconnic, 1–31. Rosslyn, VA: ERIC Clearinghouse on Rural Education and Small Schools.
- MCCARTY, TERESA L. 2011. The role of native languages and cultures in American Indian, Alaska Native, and Native Hawaiian student achievement. State of the field policy brief, Center for Indian Education. Tempe: Arizona State University.
- MCCARTY, TERESA L. 2016. Policy and politics of language revitalization in the USA and Canada. In Coronel-Molina & McCarty, 43–93.
- MCCARTY, TERESA L., and TIFFANY LEE. 2014. Critical culturally sustaining/revitalizing pedagogy and Indigenous education sovereignty. *Harvard Educational Review* 84.101–24.
- MCCARTY, TERESA L.; LUCILLE J. WATAHOMIGIE; AKIRA Y. YAMAMOTO; and OFELIA ZEPEDA. 1997. School-community-university collaborations: The American Indian Language Development Institute. In Reyhner 1997, 85–104.
- MCIVOR, ONOWA. 2013. The protective effects of language learning, use and culture on the health and well-being of Aboriginal people in Canada. In Norris et al., 123–31.
- MCIVOR, ONOWA; ART NAPOLEON; and KERISSA M. DICKIE. 2009. Language and culture as protective factors for at-risk communities. *International Journal of Indigenous Health* 5.6–25. DOI: 10.18357/ijih51200912327.
- MEEK, BARBRA A. 2009. Language ideology and Aboriginal language revitalization in the Yukon, Canada. *Native American language ideologies: Beliefs, practices and struggles in Indian country*, ed. by Paul V. Kroskrity and Margaret C. Field, 151–71. Tucson: University of Arizona Press.
- MEEK, BARBRA A. 2010. *We are our language: An ethnography of language revitalization in a Northern Athabaskan community*. Tucson: University of Arizona Press.
- MILLOY, JOHN S. 1999. *A national crime: The Canadian government and the residential school system, 1879 to 1986*. Manitoba: University of Manitoba Press.
- MOSLEY-HOWARD, G. SUSAN; DARYL BALDWIN; GEORGE IRONSTRACK; KATE ROUSMANIERE; and BOBBE BURKE. 2015. Niila Myaamia (I am Miami): Identity and retention of Miami Tribe college students. *Journal of College Student Retention: Research, Theory & Practice* 17(4).437–61. DOI: 10.1177/1521025115579249.
- MUFWENE, SALIKOKO S. 2017. Language vitality: The weak theoretical underpinnings of what can be an exciting research area. *Language* 93(4).e202–e223.
- NASH, CARLOS M. 2017. Documenting Ekegusii: How empowering research fulfills community and academic goals. *Africa's endangered languages: Documentary and theoretical approaches*, ed. by Jason Kandybowicz and Harold Torrence, 165–86. New York: Oxford University Press.
- NATIONAL CENTER FOR EDUCATIONAL STATISTICS. 2017. Public high school graduation rates. Online: https://nces.ed.gov/programs/coe/indicator_coi.asp, accessed June 7, 2017.
- NATIONAL SCIENCE FOUNDATION, National Center for Science and Engineering Statistics. 2017. *Women, minorities, and persons with disabilities in science and engineering: 2017*. Special report NSF 17-310. Arlington, VA. Online: www.nsf.gov/statistics/wmpd/, accessed June 7, 2017.
- NEWLIN HUTCHINSON, REBECCA, and SONYA SHIN. 2014. Systematic review of health disparities for cardiovascular diseases and associated factors among American Indian and

- Alaska Native populations. *PLoS ONE* 9(1):e80973. DOI: 10.1371/journal.pone.0080973.
- NICHOLAS, SHEILAH E. 2008. *Becoming 'fully' Hopi: The role of the Hopi language in the contemporary lives of Hopi youth—A Hopi case study of language shift and vitality*. Tucson: University of Arizona dissertation.
- NORRIS, JOHN M., and LOURDES ORTEGA. 2000. Effectiveness of L2 instruction: A research synthesis and quantitative meta-analysis. *Language Learning* 50.417–528. DOI: 10.1111/0023-8333.00136.
- NORRIS, MARY JANE; ERIK ANONBY; MARIE-ODILE JUNKER; NICHOLAS OSTLER; and DONNA PATRICK (eds.) 2013. *FEL XVII: Endangered languages beyond boundaries: Community connections, collaborative approaches, and cross-disciplinary research*. Bath: The Foundation for Endangered Languages.
- OSTER, RICHARD T.; ANGELA GRIER; RICK LIGHTNING; MARIA J. MAYAN; and ELLEN L. TOTH. 2014. Cultural continuity, traditional Indigenous language, and diabetes in Alberta First Nations: A mixed methods study. *International Journal for Equity in Health* 13.92–103. DOI: 10.1186/s12939-014-0092-4.
- REPORT OF INDIAN PEACE COMMISSIONERS from the Annual Report of the Commissioner of Indian Affairs for the year of 1868. Washington, DC: Government Printing Office. Online: <https://archive.org/details/usindianaffairs67usdorich>, accessed March 22, 2015.
- REYHNER, JON. 1991. Plans for dropout prevention and special school support services for American Indian and Alaska Native students. *Indian Nations at Risk Task Force commissioned papers*. Washington, DC: US Department of Education. Online: <https://eric.ed.gov/?id=ED343762>, accessed June 7, 2017.
- REYHNER, JON (ed.) 1997. *Teaching Indigenous languages*. Flagstaff: Northern Arizona University. Online: <https://eric.ed.gov/?id=ED415058>, accessed May 27, 2017.
- REYHNER, JON, and JEANNE EDER. 2004. *American Indian education: A history*. Norman: University of Oklahoma Press.
- RICE, KEREN. 2006. Ethical issues in linguistic fieldwork: An overview. *Journal of Academic Ethics* 4.123–55. DOI: 10.1007/s10805-006-9016-2.
- RICE, KEREN. 2011. Strategies for moving ahead: Linguistics and community goals. Invited plenary address at the 3rd International Conference on Language Documentation and Conservation, Mānoa, HI. Audio online: <http://hdl.handle.net/10125/5169>.
- ROMERO LITTLE, MARY EUNICE, and TERESA L. McCARTY. 2006. Language planning challenges and prospects in Native American communities and schools. Policy brief for the National Education Policy Center, University of Colorado. Online: <http://nepc.colorado.edu/publication/language-planning-challenges-and-prospects-native-american-communities-and-schools>, accessed June 7, 2017.
- ROSBOROUGH, PATRICIA CHRISTINE. 2012. *K'angextola sewn-on-top: Kwak'wala revitalization and being indigenous*. Vancouver: University of British Columbia dissertation.
- SAMMONS, OLIVIA N., and WESLEY Y. LEONARD. 2015. Breathing new life into Algonquian languages: Lessons from the Breath of Life Archival Institute for Indigenous Languages. *Papers of the forty-third Algonquian Conference: Actes du Congrès des Algonquistes*, 207–24. Albany: SUNY Press.
- SMITH, LINDA TUHIWAI. 2012. *Decolonizing methodologies: Research and Indigenous peoples*. 2nd edn. New York: Zed Books.
- TAFF, ALICE; MELVATHA CHEE; JAECI HALL; MILLIE YÉI DULITSEEN HALL; KAWENNIYÓHSTHA NICOLE MARTIN; and ANNIE JOHNSTON. 2018. Indigenous language use impacts wellness. *Handbook of endangered languages*, ed. by Kenneth Rehg and Lyle Campbell. New York: Oxford University Press, to appear.
- TRUTH AND RECONCILIATION COMMISSION. 2015. *Honouring the truth, reconciling for the future: Summary of the final report of the Truth and Reconciliation Commission of Canada*. Online: http://www.trc.ca/websites/trcinstitution/File/2015/Honouring_the_Truth_Reconciling_for_the_Future_July_23_2015.pdf.
- TWITCHELL, LANCE A. (X'UNEI). 2016. *Haa wsineix haa yoo x'atangi: Our language saved us*. Fairbanks: Alaska Native Language Center.
- UNITED STATES CENSUS BUREAU. 2016. Facts for features: American Indian and Alaska Native heritage month: November 2016. Online: <https://www.census.gov/newsroom/facts-for-features/2016/cb16-ff22.html>, accessed June 7, 2017.

- WATAHOMIGIE, LUCILLE J., and AKIRA Y. YAMAMOTO. 1992. Local reactions to language decline. *Language* 68(1).10–17. DOI: 10.1353/lan.1992.0076.
- WHALEN, D. H.; MARGARET MOSS; and DARYL BALDWIN. 2016. Healing through language: Positive physical health effects of indigenous language use. *F1000Research* 5:852. DOI: 10.12688/f1000research.8656.1.
- WHITBECK, LES B.; GARY W. ADAMS; DAN R. HOYT; and XIAOJIN CHEN. 2004a. Conceptualizing and measuring historical trauma among American Indian people. *American Journal of Community Psychology* 33.119–30. DOI: 10.1023/B:AJCP.0000027000.77357.31.
- WHITBECK, LES B.; XIAOJIN CHEN; DAN R. HOYT; and GARY W. ADAMS. 2004b. Discrimination, historical loss and enculturation: Culturally specific risk and resiliency factors for alcohol abuse among American Indians. *Journal of Studies on Alcohol* 65.409–18. DOI: 10.15288/jsa.2004.65.409.
- YAMADA, RACQUEL-MARÍA. 2014. Training in the community-collaborative context: A case study. *Language Documentation & Conservation* 8.326–44. Online: <http://hdl.handle.net/10125/24611>.
- ZIMMERMAN, MARC A.; JESUS RAMIREZ; KATHLEEN M. WASHIENKO; BENJAMIN WALTER; and SANDRA DYER. 1998. Enculturation hypothesis: Exploring direct and protective effects among Native American youth. *Resiliency in ethnic minority families, vol. 1: Native American and immigrant families*, ed. by Hamilton I. McCubbin, Elizabeth A. Thompson, Anne I. Thompson, and Julie E. Fromer, 199–220. Thousand Oaks, CA: Sage.

[cmfitz@uta.edu]

[Received 26 June 2017;
revision invited 2 July 2017;
revision received 31 July 2017;
accepted 31 July 2017]