

# Annual Review of Linguistics The Status of Endangered Contact Languages of the World

## Nala H. Lee

Department of English Language and Literature, National University of Singapore, Singapore 117571; email: nala.lee@nus.edu.sg

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creoles, pidgin, mixed languages, contact, endangerment, shift

#### Abstract

This article provides an up-to-date perspective on the endangerment that contact languages around the world are facing, with a focus on pidgins, creoles, and mixed languages. While language contact is often associated with language shift and hence language endangerment, languages arising from contact also can and do face the risk of endangerment. Recent observations and studies show that contact languages may be at twice the risk of endangerment and loss compared with noncontact languages. The loss of these languages is highly consequential. The arguments that usually apply to why noncontact languages should be conserved also apply to many of these contact languages. This article highlights recent work on the documentation and preservation of contact languages and suggests that much more can be done to protect and conserve this unique category of languages.

# 1. THE GAP WITHIN LANGUAGE ENDANGERMENT AND LOSS: CONTACT LANGUAGES

The disappearance of languages has been common throughout history (Swadesh 1948), but only recently has the exigency of the issue been recognized in linguistics. For reasons involving economic, political, geographical, demographic, and sociocultural factors, as well as the attitudes of speakers toward the languages under threat and the dominant languages around them (Campbell 2017), at least one language becomes extinct every 3 months (Campbell et al. 2013). Although some scholars have argued that language death is part of a natural cycle (Ladefoged 1992), which sometimes also includes the ontogenesis of languages (Mufwene 2017), there are multiple reasons why anyone should care about language loss. Language loss often involves the loss of cultural or ethnic identity (Tsunoda 2005), the loss of part of the sum of human knowledge (Hale 1992), the loss of linguistic diversity (Hale 1992), and the loss of languages themselves, all of which affect linguists' ability to discover the full range of what is possible in human language and cognition (Lee & Van Way 2016).

Seventy years on, the study of language endangerment has taken off in the form of language documentation and language revitalization (Rehg & Campbell 2018). Linguistics has made significant progress since Swadesh's (1948, p. 226) observation that no serious study had yet been made of the disappearance of languages. He had then urged field-workers to carry out research with individuals to observe what leads to language replacement. Swadesh (1948, p. 234) describes the circumstances of a number of languages, summing up that "the process [of language replacement] does not move uniformly but usually first affects certain sections of the people—defined in terms of geographical location, age-group, sex, economic and cultural status—and certain types of personality." Notably, while the languages he covers in the paper are what might be considered typically indigenous ones, Swadesh (1948, p. 226) also likens the circumstances he describes to those of immigrant groups that have been displaced from their countries and cultures. This observation underscores the importance of focusing on nonindigenous languages. Yet, much of the discussion of endangerment and loss focuses on indigenous languages, and less is said about the loss of nonindigenous ones, such as contact languages (Lee 2017, Mufwene 2017).

Contact languages here refers to languages that arise from situations of contact between speakers of different languages; in these cases, the resultant languages involve "such extreme restructuring and/or such pervasive mixture of elements from more than one language that they cannot be considered cases of either maintenance or shift in the strictest sense of those terms" (Winford 2003, p. 17). Contact languages include pidgins, creoles, and mixed languages. A pidgin is a language that emerges from "linguistic negotiation" when communities with no common language have to develop "a common means of communication" (Thomason & Kaufman 1988, p. 167). The emergent pidgin is not mutually intelligible with the other languages spoken by the speaker of the pidgin, has some degree of conventionalization, is not made up in an ad hoc manner, and is usually not spoken natively by anyone (Thomason & Kaufman 1988). A creole, on the other hand, has traditionally referred to a pidgin that has gained native speakers (Holm 1989) or is differentiated from a pidgin by vernacularization (wherein the language gains use as a vernacular) (Chaudenson 1974). Typically, creoles are considered more syntactically elaborate than pidgins (Winford 2003). Opinions differ regarding the simplicity and complexity of creoles themselves. Authors such as McWhorter (2005) have postulated that creole systems are extremely simple, while Aboh & Smith's (2009) edited volume states otherwise. In terms of the component languages of both pidgins and creoles, the lexifier language (also known as the superstrate in some literature) provides the source material for most of the lexicon and is usually associated with the language that was spoken by the group with more prestige or socioeconomic power at the time of the pidgin or creole's formation. The substrate language refers to the language of the subordinate group and is usually the language that grammatically influences the pidgin or creole, although the actual amount of substrate influence can vary, and pidgins and creoles can draw from multiple substrate languages (Winford 2003). A mixed language differs, then, by being created in solely two-language contact scenarios, with at least one of the two speaker groups being highly bilingual. The resultant mixture is easily separable by component languages, and there would be no simplification of either component language because of the highly bilingual context in which the language was created (Thomason 1997). However, it is generally agreed in contact linguistics that the contact languages that fall within each category are often structurally and sociohistorically diverse (Thomason 1997). In some instances, languages traditionally perceived as pidgins do have native speakers (e.g., see Edionhon 2018 on West Africa's pidgins). It has also been said that there is no strong evidence that creoles emerge directly from earlier pidgins and that no structural criteria can clearly distinguish creoles from other types of languages (Winford 2003). For example, while Sri Lanka Malay has been previously classified as a creole (Smith et al. 2004), there is no single well-defined pidgin that Sri Lanka Malay appears to have been derived from, and the language is structurally more complex than one might expect (Ansaldo 2008) if one expects creoles to be simple (see McWhorter 2005). Structurally, mixed languages are also a diverse category; because they have different types of subsystem splits, the grammar and lexicon are not split the same way across all mixed languages. For example, Ma'a (also known as Mbugu), spoken in Tanzania by a nomadic group that moved into a region surrounded by Bantu languages, combines Bantu grammar with Cushitic lexicon (Mous 2003), while Michif, spoken by the descendants of Cree, Nakota, and Ojibwe-speaking women and French-speaking fur traders in the Saskatchewan and Manitoba regions of Canada and the North Dakota and Montana regions of the United States, combines Cree verb phrases with French noun phrases (Bakker 1997). Therefore, while this article predominantly considers pidgins, creoles, and mixed languages, it also includes contact languages that do not fit neatly into these categories, given the complexity surrounding categorization.

The gap where contact languages should go in the discussion of endangerment and loss has received increased attention, particularly in the last decade. In a review of a book concerning language endangerment, Mühlhäusler (2003, pp. 243-44) points out that "none of the authors addresses the massive loss of Pidgins, Creoles and other impure contact languages....We need to beware of the narrowly focused discursive construction of endangered languages." In the same vein, Garrett (2006, p. 175) states that much of the language endangerment discussion is focused on "relatively obscure and 'exotic' languages, and almost never contact languages." In direct response to recent language documentation efforts, O'Shannessy (2012) observes that not much attention is being paid to newer contact varieties, possibly because of the perceived need to document older, disappearing traditional languages—contact languages having less time depth than traditional ones. Even more recently, Mufwene (2017) states that the discourse in the subfield of language endangerment and loss has left out nonindigenous populations, which would include creole populations among others. In a response to Mufwene, Lee (2017) points out that nothing in the expressed purpose or intents of the major agencies involved in language loss and endangerment would necessarily disadvantage those who study contact languages. The only agency that has an indigenous emphasis is UNESCO; one of its cultural themes is "[m]aintaining indigenous languages, conserving biodiversity" (UNESCO 2017). However, UNESCO's view should not be taken as the dominant view on language endangerment and loss. The Endangered Languages Project online platform (http://www.endangeredlanguages.com), which houses the Catalogue of Endangered Languages (Campbell & Belew 2018), "[s]upport[s] the documentation and revitalization of the world's endangered languages," and the site features contact languages in addition to noncontact languages. The Endangered Languages Documentation Program (https://www.eldp.net) at SOAS states that its mission is "the preservation of endangered languages globally," and it has featured contact languages, such as Malacca Portuguese Creole (Pillai 2011) (spoken in Malaysia and Singapore), in its online archive. Agencies such as these value work on all types of endangered languages, and whether these languages are indigenous or otherwise is secondary (Lee 2017).

Nevertheless, much less is said about the endangerment and loss of contact languages compared with indigenous languages. This contrast may be ingrained in the discourse that frames contact languages as part of the endangerment issue itself, representative of some intermediate stage before loss or viewed as the cause of loss. For example, Swadesh (1948) describes how native Tasmanians were brought onto Flinders Island in Australia in the 1800s by the English; even though four dialects of Tasmanian were spoken, conversing among themselves was difficult. The language was almost lost, and English and pidgin words were used in their speech. In Nagaland, the use of Nagamese, an Assamese-based creole (in addition to Assamese), is said to have threatened the Ao language with extinction (van Driem 2007, p. 322). In more recent literature, Essegbey (2019) discusses the threat that pidgins and creoles pose to indigenous languages in Africa—these pidgins and creoles having been formed via contact with colonial languages. He cites the case of Nigerian Pidgin English, which has threatened virtually all indigenous Nigerian languages (also see Williamson 1997), as well as the case of Cameroonian Pidgin, which is threatening language diversity within Lower Fungom, Cameroon (also see Good 2012).

Although in some instances contact languages can threaten the vitality of other languages, and not all contact languages are endangered or even equally endangered, it is important to bear in mind that language contact is not a zero-sum game wherein one language disappears because its speakers inevitably shift to the other language that they are in contact with (Thomason 2018, p. 67). Whether language shift occurs depends on multiple factors, including economic pressures, political considerations, and speakers' attitudes toward their heritage language (Thomason 2018). For example, contact languages can serve to "maintain social boundaries" in situations of balanced bilingualism or multilingualism, in which the pidgin is added to the speaker's repertoire as a resource but not at the expense of the heritage language (Thomason 2018, p. 74). Thomason (2018) points out that native languages spoken by those who used Chinook Jargon for trade in the US Pacific Northwest and British Columbia are now endangered, but not because the speakers used Chinook Jargon. In very different circumstances, the contact language that emerges can partially maintain components of an endangered language. O'Shannessy (2012, p. 86) highlights the case of Light Warlpiri in Australia, a mixed language comprising Warlpiri, Kriol, and Australian English. Even though Light Warlpiri does not maintain Warlpiri entirely, younger speakers use it to resist a language shift away from Warlpiri. Also in Australia, instead of shifting completely to Kriol, the dominant English-based creole of the region, the Gurindii people have maintained Gurindji elements in the mixed language Gurindji Kriol (Meakins 2008). Meakins (2008, p. 69) suggests that these preserved Gurindji elements should be considered "expressions of persistence of a Gurindji identity," the language having emerged during a land rights movement that saw the Gurindji people leading a struggle to regain control of their traditional lands.

The relationship between contact languages and language endangerment is much more nuanced than it is straightforward or even causal—situations of contact do not always lead to endangerment, and contact languages, being products of contact themselves, should not be viewed inherently as part of the endangerment problem. Conversely, this article highlights the threat of endangerment and loss that contact languages themselves face, assesses why they are at such high levels of endangerment, debunks the notion that there is no value in preserving them, and briefly reviews documentation and revitalization work that is being carried out on some of these languages.

# 2. THE RATE OF LOSS OF CONTACT LANGUAGES

Several regional and global overviews of endangered languages include information about contact languages. A volume edited by Brenzinger (2007) collected regional surveys of endangered languages and listed a number of contact languages at various levels of endangerment based on a schema developed by Krauss (2007). Among them, Kallawaya, a mixed language, was noted to have possibly lost all transmission in Hispanic South America (Adelaar 2007, p. 19). In lowland tropical South America, the Berbice, Skepi, and Kwinti creoles were said to be no longer passed down, spoken only by those of the grandparent or great-grandparent generations (Moore 2007, pp. 51-52). In China and Mainland Southeast Asia, two Portuguese-based creoles, Papia Kristang of Malaysia (also known as Malacca Portuguese Creole) and Patuá of Macau, were listed as severely endangered (Bradley 2007, p. 291). In the Western Pacific area, there were 20 pidgins and creoles out of 233 threatened languages, and another 4 further east of that area (Wurm 2007, p. 378). In Indonesia, these included one creole in Maluku, one in Timor Flores, and one pidgin in Irian Jaya. In Papua New Guinea, there were at least 15 threatened pidgins and creoles among the 65 threatened languages surveyed. One pidgin and one creole were threatened in Micronesia, and another one pidgin and one creole were endangered in Polynesia. More recently, in the Catalogue of Endangered Languages, hosted on the Endangered Languages Project online portal (http://www.endangeredlanguages.com), out of a total of 3,421 languages on the site (which aims to represent all languages in the world that are at various levels of risk), 25 pidgins and creoles and 6 mixed languages are featured (5 endangered and 1 dormant). Out of the 25 pidgins and creoles noted, 6 are English based, 4 are Dutch based, 2 are French based, 2 are Portuguese based, 2 are Hausa based, 2 are Arabic based, and the remaining are individually based on other languages (Campbell & Belew 2018, p. 41). The 5 mixed languages identified as endangered are Michif (French and Cree), Tagdal (Songhay and Tuareg), Kallawaya (Quechua and Puquina), Mbugu (Bantu and Cushitic), and Wutunhua (Chinese and Tibetan, Mongolian) (Russell & Campbell 2018, p. 42). These languages are spoken, respectively, in Canada and the United States, Niger, Bolivia, Tanzania and China. Copper Island Aleut (Russian and Aleut), which was previously spoken on the Bering Island, is identified as dormant (Russell & Campbell 2018, p. 42). Although these figures are not as considerable as in Garrett's (2006) claim, they are still a cause for concern. A more recent study conducted by Lee (2018) comes closer to Garrett's assertion and shows that the risk of endangerment and loss is essentially twice as great for contact languages compared with all of the world's languages.

Based on information provided in the Catalogue of Endangered Languages (Campbell & Belew 2018) and the *Atlas of Pidgin and Creole Languages* online portal (https://apics-online.info) (Michaelis et al. 2013), the levels of endangerment of 96 contact languages are assessed by Lee (2018). These languages are assessed using the Language Endangerment Index (LEI) (Lee & Van Way 2016, 2018a,b), which was developed as a supplement to the Catalogue of Endangered Languages to compare levels of endangerment or vitality among a large number of languages (Lee 2018). The LEI is designed to provide information regarding the level of endangerment of any language on the basis of four criteria: intergenerational transmission (whether the language is being passed on to younger generations); absolute number of speakers; speaker number trends (whether numbers are increasing, decreasing, or stable); and domains of use (whether the language is used in a wide number of domains or limited ones). These factors are the most commonly known ones and are comparable among various languages. In addition to the language's overall score for level of endangerment, the LEI provides a level of certainty based on the number of factors used in the assessment—the more factors used in the assessment, the more certain one can be about the level of endangerment. Incorporating a level-of-certainty score ensures that a vitality score

Table 1 The four factor scales on the Language Endangerment Index

5	4	3	2	1	0
Critically	Severely	E I I	TI . 1	37.1. 11	6.6
endangered	endangered	Endangered	Threatened	Vulnerable	Safe
Scale of intergenerational transmission					
There are only a few elderly speakers.	Many of the grandparent generation speak the language, but the younger people generally do not.	Some adults in the community are speakers, but the language is not spoken by children.	Most adults in the community are speakers, but children generally are not.	Most adults and some children are speakers.	All members of the community, including children, speak the language.
Scale of absolute number of speakers					
1–9 speakers	10–99 speakers	100–999 speakers	1,000–9,999 speakers	10,000–99,999 speakers	≥100,000 speakers
Scale of speaker nu	mber trends				
A small percentage of the community speaks the language, and speaker numbers are decreasing very rapidly.	Less than half of the community speaks the language, and speaker numbers are decreasing at an accelerated pace.	Only about half of community members speak the language. Speaker numbers are decreasing steadily, but not at an accelerated pace.	A majority of community members speak the language. Speaker numbers are gradually decreasing.	Most members of the community speak the language. Speaker numbers may be decreasing, but very slowly.	Almost all community members speak the language, and speaker numbers are stable or increasing.
Scale of domains of	use				
Used only in a few very specific domains, such as in ceremonies, songs, prayer, proverbs, or certain limited domestic activities	Used mainly just in the home and/or with family, and may not be the primary language even in these domains for many community members	Used mainly just in the home and/or with family, but remains the primary language of these domains for many community members	Used in some nonofficial domains along with other languages, and remains the primary language used in the home for many community members	Used in most domains except for official ones such as government, mass media, education, etc.	Used in most domains, including official ones such as government, mass media, education, etc.

Data from Lee & Van Way (2016).

can be assigned even if there is information regarding only one factor of endangerment, since not all types of sociological information relevant to vitality assessments are available for all languages. The LEI is therefore used to provide vitality assessments of an extended list of contact languages.

The main mechanisms and motivations of the LEI are explained in Lee & Van Way (2016). The four criteria used for assessment are operationalized as individual scales (presented in **Tables 1** and **2**). Languages are scored on each scale, with each individual score corresponding to a descriptor on the scale. A language that scores 0 is regarded as safe on that scale, whereas a score of 5 suggests critical endangerment. The descriptors for the scores 0, 1, 2, 3, 4, and 5 are Safe, Vulnerable,

Table 2 Language Endangerment Index and levels of certainty

Language Endangerment Index	Level of certainty		
100–81% = Critically endangered	25 points = 100% certain, based on the evidence available for each of the four factors		
80–61% = Severely endangered	20 points = 80% certain, based on the evidence available		
60–41% = Endangered	15 points = 60% certain, based on the evidence available		
40–21% = Threatened	10 points = 40% certain, based on the evidence available		
20–1% = Vulnerable	5 points = 20% certain, based on the evidence available		
0% = Safe	Not applicable		

Data from Lee & Van Way (2016).

Threatened, Endangered, Severely endangered, and Critically endangered. A possible criticism of these scales is that the categories for languages at risk (all but Safe) are overly broad, but the LEI errs on the side of caution. Another way to conceptualize this is that each at-risk category represents a level removed from complete safety for the language, considering that complete vitality and language death are two ends on the same continuum.

The scores for the available factors are then aggregated, with the score for intergenerational transmission multiplied by two—intergenerational transmission being the most critical factor for the continued survival of a language. The total score is converted to a percentage of the highest attainable score based on the number of factors used. The formula used is presented here:

Level of endangerment = {[(intergenerational transmission score  $\times$  2) + absolute number of speakers score + speaker number trends score + domains of use score] / total possible score based on number of factors used}  $\times$  100

Results are interpreted using the index provided in **Table 2**. The index represents various levels of overall endangerment and is accompanied by a scale that provides a certainty level based on the maximum score attainable for the number of factors used in the assessment.

A total of 96 contact languages were surveyed by Lee (2018) using the LEI, with levels of endangerment generated for 93 out of the 96 languages; no vitality information was available for the remaining 3 languages: Barikanchi and Gibanawa (both spoken in Nigeria) and Settla (spoken in Zambia and Kenya). In some cases, irrelevant factors were not used in the analysis. For example, some pidgins are not passed down to young children, and the scale of intergenerational transmission would not be relevant in those instances (see Thomason 2015, p. 7). Out of the 93 languages for which at least some vitality information is available, 10 are dormant, having lost their last speaker within approximately the last 50 years. Dormant languages include Ndyuka-Trio Pidgin (Suriname), Chinese Pidgin English (China), Chinese Pidgin Russian (Siberia, Russia, and China), Pidgin Hawaiian (Hawai'i), Eskimo Pidgin (Siberia, United States, Canada, and Greenland), Bungi (Canada), Negerhollands (US Virgin Islands), Batavia Creole (Indonesia), Berbice Creole Dutch (Guyana), and Copper Island Aleut (Bering Island). Another 11 languages are critically endangered: Baba Malay (Malaysia and Singapore), Chinook Wawa (Canada and United States), Javindo (Indonesia), Kodiak Russian Creole (United States and Russia), Macao Portuguese Creole (Macau), Michif (Canada and United States), Petjo (Indonesia), Principense (São Tomé and Príncipe), San Miguel Creole French (Panama), Malabar-Sri Lanka Portuguese (Sri Lanka), and Yimas-Arafundi Pidgin (Papua New Guinea). An additional 5 languages are severely endangered: Cavite Chabacano (Philippines), Kallawaya (Bolivia), Louisiana French Creole (United States), Ngatik Men's Creole (Sapwuahfik and Pohnpei), and Singapore Bazaar Malay (Singapore). Another 6 languages are endangered: Diu Indo-Portuguese (India), Malacca Portuguese Creole (Malaysia and Singapore), Sri Lanka Malay (Sri Lanka), Ternate Chabacano (Philippines), Wutunhua (China), and Yilan Creole (Taiwan). A total of 21 languages are threatened, and the remaining 39 languages are vulnerable. These assessments have varying levels of certainty. Seychelles Creole (Seychelles) is considered safe, but only at a 60% level of certainty. Notably, contact languages are most threatened according to the scales of intergenerational transmission and domains of use (Lee 2018).

After subtracting the number of safe languages and languages for which there is no vitality information, the proportion of contact languages that are at some level of risk or already dormant is 95.8%. By comparison, 49.5% of all languages in the world are at various levels of risk or already dormant (Lee 2018). Thus, the risk of endangerment and loss for contact languages is almost twice that of all the world's languages (Lee 2018). These numbers substantiate Garrett's (2006, p. 178; 2012, p. 145) claim that contact languages are "doubly marginalized" or endangered.

# 3. WHY ARE CONTACT LANGUAGES DOUBLY THREATENED?

Contact languages face the same types of threats that noncontact languages undergo; these include economic considerations, political factors, demographic factors, language attitudes, and ideology (Belew & Simpson 2018). Economic factors can play a major role in language loss when speakers shift to a different language for economic opportunities or when changes take place in a region because of economic transformations, particularly those related to globalization. Political factors include policies that are unfavorable to a language as well as a lack of institutional support. Note that in relation to these issues, Garrett (2012, p. 152) states that contact languages are usually associated with populations lacking political, economic, and even social power. In terms of demographic factors, a language's speaker base can be disrupted for various reasons including war, genocide, natural disaster, and intermarriage with other linguistic groups. Demographically, the threats to pidgins, creoles, and mixed languages can vary, given that traditional pidgins are not associated with an ethnic group of native speakers, unlike creoles and mixed languages, so when a pidgin loses speakers, it typically loses nonnative ones. Attitudes and ideologies are important because pride, prestige, or shame associated with a language affects whether the language is learned, maintained, or lost. If factors such as these affect all languages, why would contact languages be doubly threatened compared with the world's languages in general?

An examination of the individual factors associated with language loss provides some perspective. Regarding economic factors, Nettle & Romaine (2000, p. 127) address recent responses to globalization and the types of transformations that have taken place in the developed world and are now spreading to the developing world. They provide examples of how speakers shift toward another language because they associate the target language with "economic possibilities of the modern world" (Nettle & Romaine 2000, p. 127). Examples include Cornish speakers adopting English in the United Kingdom and Taiap speakers in Gapun, Papua New Guinea, shifting toward Tok Pisin; the latter is a reminder that some contact languages can also impinge on the vitality of other languages. Yet, the fact remains that most contact languages lack economic power (Garrett 2012). Frank (1993) examines the attitudes of speakers toward St. Lucian Creole French (spoken on the island of St. Lucia) and shows that economic factors influence people's language choices there. Speakers of other contact languages around the world have had similar experiences. In Singapore, Baba Malay speakers began shifting to English in the early 1800s; they were among the first to learn English when English medium schools were established during the period of British colonial rule, and they prospered in their role as middlemen between the British administrators and the new migrants who did not yet speak English (Ansaldo et al. 2007). In Sri Lanka, a conscious shift is said to be taking place, wherein Sri Lanka Malay speakers are aligning themselves with Standard Malay speakers (even though Malay is not a dominant language in Sri Lanka) in

part because Standard Malay is considered a resource economically and globally (Lim & Ansaldo 2015). In their chapter focusing on the impact of the economic wave, Nettle & Romaine (2000) also highlight the lasting influence of colonization. While decolonization has taken place in most parts of the world, the economic and political frameworks that remain are Westernized ones. These tend to privilege languages such as English, French, and Spanish. Notably, Tok Pisin in Papua New Guinea, an English-based creole, is also viewed as a dominant language associated with the postcolonial elite (Nettle & Romaine 2000, p. 114). However, in many cases, economies differentiate between the standard variety and the contact variety that remains in situ. For example, Standard English is promoted through the Speak Good English Movement in Singapore rather than Singlish, the contact variety that was formed via contact among speakers of English and speakers of Hokkien, Malay, and other languages; in fact, Singlish is perceived as a threat to the acquisition of Standard English (Nirmala 2000).

Closely related to economic considerations are political ones. These can include the official suppression of languages, the implementation of policies that are detrimental to small languages, and the lack of institutional support for these languages (Belew & Simpson 2018, p. 53). Thus, it matters whether a contact language is vested with political authority. More often than not, however, contact languages do not receive full political support. Many contact languages emerged in the context of colonial expansion, displacement, and relocation (Lee 2017, p. 239), although Chinook Jargon is believed to predate European contact, having originated in the Pacific Northwest region of North America as a trading language between primarily the Chinook and Nuuchah-nulth people (Mufwene 2015). The contact languages that did emerge in a colonial context did not possess the same power as the languages of the colonizers. In many instances, a contact language continues to exist alongside a more dominant language, which may or may not be the lexifier language (Garrett 2006), and the contact language functions as the Low or unofficial variety in a diglossic situation with the more dominant language (Lee 2018, p. 69). Valdman (1987, p. 107), stressing the precariousness of creoles specifically, states that "[c]reoles are inexorably destined to dissolve in these major languages via the process of decreolization" (also see DeGraff 2001). Creoles that have a diglossic relationship with their more dominant lexifier language include Jamaican Creole and Trinidad English Creole. These languages function as unofficial vernaculars while standard English is used for most official domains in Jamaica and the Republic of Trinidad and Tobago (Farquharson 2013, Mühleisen 2013). Essentially, even if a contact language is given some sort of national status, it seldom has equal and unfettered use in all domains (Lee 2017). For example, while Haitian Creole and French are co-official languages in Haiti, Haitian Creole is seldom used in courts (DeGraff 2017b) and is not typically used as the main language in schools (DeGraff 2017a). Note that these languages are not perceived as being particularly endangered, having more than a million speakers each, but it is much easier for languages to lose domains than to gain them (Lee 2017). As a case in point, Lee (2017) cites the example of Afrikaans, the classification of which (as a creole) has been debated to some extent (see Markey 1982, Thomason & Kaufman 1988). While Afrikaans is 1 of 11 official languages of South Africa and generally viewed as dominant, English has replaced it as the official language of the courts (Nombembe 2017). An example of a creole that eventually became dormant after its official functions were subsumed gradually by English is the Dutch-based Negerhollands. Spoken on the islands of St. Thomas, St. John, and St. Croix (the current US Virgin Islands), Negerhollands was reported to have lost its last speaker in 1987 (van Sluijs 2013). Intrinsically, contact languages, with their use in curbed domains resulting from political considerations, are highly susceptible to language endangerment and loss (Lee 2017).

It is also important to consider demographic factors. Different types of contact languages arise for different functional purposes. For example, pidgins typically arise to facilitate intergroup

communications. Less typically, pidgins can arise to prevent outsiders from acquiring the full language of the community providing the lexicon. For example, Delaware (Lenape) Pidgin existed in the seventeenth century to allow the Delawares to conceal their language from the Dutch (Jameson 1909, p. 128; Thomason 2018, p. 74) in the Mid-Atlantic region of the current-day United States. Creoles and mixed languages may arise to function as the home language of a newly formed community, although the situations of individual communities may differ, as in the cases of Light Warlpiri and Gurindji Kriol, both of which developed in Australia as ways of maintaining their communities' identities in the face of possible language shift. Of pidgins, Thomason (2018, p. 74) states that while many are "ephemeral," "they are stable as long as the social circumstances of their emergence are stable." The underlying assumption here can be extended to other contact languages that are not necessarily pidgins. Regardless of their function, contact languages are stable as long as the social circumstances enabling them to fulfill their function remain stable. In effect, changes in the demographic base of the speakers play a large part in whether those functions continue to be fulfilled by the contact language.

Pidgins can lose their entire demographic base when they become irrelevant, having lost the social circumstances that led to their emergence. For example, Chinese Pidgin English, also known as China Coast Pidgin, arose out of trade within the Pearl River Delta of Southern China (between Macau and Canton, now known as Guangzhou) (Ansaldo 2009, p. 184), but it is no longer spoken (Vellupillai 2015, p. 157). Ansaldo (2009, p. 196) points out that while the decline of Chinese Pidgin English has been mostly attributed to English-medium education, the very ecology that produced the language in fact dissolved with the decline of the Canton Trade and the Japanese occupation; as a result, the needs of the speakers changed. Under very different demographic circumstances, contact languages that are particularly threatened where speaker base is concerned are those formed by intermarriages. This affects creoles and mixed languages more than it does traditional pidgins with no native speakers. The emergence of these communities is by nature limited to a particular time and space, during which and wherein the trend of intermarriage is prevalent enough to form a new community. The emergent community is usually marked by its own unique and often hybrid culture in addition to its own contact language. As such, later intermarriages that take place beyond that time and space, even with the same ethnic profiles, cannot be considered additions to the community, and the population size diminishes in response to the realities involved in maintaining its numbers. In Malaysia and Singapore, a contact language community affected by a naturally declining population size is the Peranakan Chinese. While the community was formed by early intermarriages between Chinese traders and local indigenous women during a time when it was rare for Chinese women to travel and settle outside of China, current intermarriages of the same pattern do not result in a Peranakan ethnicity that encompasses its own hybrid culture and language (the language here being Baba Malay). While it was once common for Peranakans to marry among themselves, these intracommunity marriages are no longer the norm (Tan 1979). With the natural progression of time and a decrease in the number of Peranakans, most Peranakans marry outside of their community to partners with whom they might share another common language, such as English (Lee 2019). The language that the younger generation adopts is rarely Baba Malay because this language is not typically spoken by those of childbearing age (Lee 2019). Other contact languages that are seemingly losing speakers because of similar pressures in maintaining speaker numbers include Malacca Portuguese Creole in Malaysia and Singapore and Michif in Canada and the northern parts of the United States. One contact language that emerged through intermarriage and is now dormant is Mednyj Aleut, which was developed by a population of Russian fur seal hunters and Aleutian women in the Bering Strait. The language was reportedly spoken by 10-12 people in 1994 (Golovko 1994, p. 113) and was said to have lost its last speaker by 2007 (Golla et al. 2007).

The prevailing attitudes and ideologies regarding a language are also important for its survival (Austin & Sallabank 2014, Belew & Simpson 2018, Sallabank 2013). On the one hand, linguistic pride and a sense of social prestige accorded to a language, or even the notion that a language is suitable for use in a particular domain or purpose, can aid its survival. On the other hand, shame and a sense of low prestige, as well as the notion that a language is backward or even broken, can ultimately lead to its demise. Note that a contact language is not immediately equated with low prestige. Take, for example, Rickford's (1986) work on the use of Guyanese Creole and standard English in Guyana. The Estate Class comprises field-workers on the sugar estates, while the Non-Estate Class comprises drivers and field foremen on the sugar estates and clerks, shop owners, and skilled tradesmen who are mostly not involved in the sugar estates. Rickford (1986, p. 218) notes that those of the Estate Class privilege the use of Guyanese Creole over standard English not because they are unable to use standard English but, rather, because the use of the creole represents a "revolutionary act, as a means of emphasizing social solidarity over individual self-advancement and communicating political militancy rather than accommodation." In a different scenario, prestige might not matter; for instance, speakers of nonstandard vernaculars may feel that they are speaking the same language as the prestigious varieties in which they are literate (Mufwene 2003). Yet in many other cases, creoles are viewed as inferior or broken versions of standard languages. Frank (2007) highlights the situation on the island of St. Lucia, where a speaker of St. Lucian Creole French reflected, "We don't speak a real language; we just speak broken French." While speakers value the use of the creole in interpersonal communication and are attracted to speeches, sermons, and radio programs in the language (Frank 1993), the creole is considered endangered (Frank 2007). Similarly, Louisiana French Creole, while clearly part of a cultural heritage, is associated with a legacy of racism and discrimination in the United States (Shahyd 2017), and attitudes toward the creole were at one point "wholly negative" (Ferreira & Holbrook 2001). At the time of Ferreira & Holbrook's (2001) research, attitudes were not strongly positive or negative, but the language is now considered critically endangered, with independent efforts being made to revitalize it (Shahyd 2017).

Also, for many contact languages, such as St. Lucian Creole French, the lexifier language is privileged over the contact language or is viewed as authentic. In a related yet different scenario, the community can end up privileging the substrate language as well. Grinevald (2005) describes how the Rama Cay community in Nicaragua asked for the revitalization of Rama and not Rama Cay Creole, which is based on Miskito Coast Creole (also found in Nicaragua and based on Creole English) and incorporates elements of Rama. Interestingly, the community did so because they perceived the lexifiers of Rama Cay Creole to be broken, and hence they also considered Rama Cay Creole broken. In doing so, they missed out on the opportunity to revitalize Rama Cay Creole, which in reality served as an identity marker (whereas Rama did not), and the creole is now moribund (Grinevald 2005). Indubitably, the attitudes of speakers and the ideologies of their communities play crucial roles in language maintenance.

### 4. WHY CARE ABOUT THE LOSS OF CONTACT LANGUAGES?

So why should anyone care about the loss of contact languages? Would this loss matter if in the same equation, new contact languages were being created (see Mufwene 2017) or unknown languages were being uncovered (for example, see Yager & Burenhult 2017)? Crucially, the creation of new languages and language death do not operate within the same equation. While there are no rates established for the genesis or uncovering of new and previously unknown languages, it is clear that there is no way these take place at the rate of one language every 3 months, which is the rate at which languages lose their last speakers (Campbell et al. 2013). Every language is

also unique in its circumstances and features (even contact languages), and the speciation of one language cannot simply replace the loss of another. In fact, all conventionally discussed consequences of language loss that apply to noncontact languages also apply to contact languages (Lee 2018). The reasons why anyone should care about the loss of contact languages themselves (just as they would care about the loss of any noncontact language) are covered by Lee (2017, 2018). These include the loss of cultural or ethnic identity (Tsunoda 2005), the loss of part of the sum of human knowledge (Hale 1992), the loss of linguistic diversity (Hale 1992), and the loss of languages themselves, all of which inform linguists' understanding of the extent of human language and cognition (Lee & Van Way 2016).

Just as traditional, indigenous languages are markers of identity, and the loss of these languages would affect the well-being of their speakers, some contact languages are symbolic of particular identities, and their loss would be equally detrimental. Antithetically, contact languages are often perceived as the products of shifting away from a heritage language toward a more dominant language. Yet, construed from another perspective, contact languages can represent a halfway point between the heritage language and the dominant language, at which point language shift can be halted; the contact language then symbolizes a separate identity that is neither the dominant group identity nor simply a composite of both dominant group and heritage group identities (Lee 2018). For example, as mentioned in Section 3, mixed languages are said to emerge as acts of identity (McConvell & Meakins 2005), and as cases in point, Light Warlpiri is used by younger Warlpiri speakers to resist a complete shift away from Warlpiri (O'Shannessy 2012), while Gurindji Kriol is used to maintain a Gurindji identity as opposed to completely shifting to Kriol (Meakins 2008). The identity function of mixed languages can emerge almost immediately with the creation of mixed languages. Some contact languages never develop this function, especially those that arise to facilitate intergroup communication but never become first languages, such as Pidgin Motu (of Papua New Guinea) and Mobilian Jargon (spoken until the 1950s around the Mississippi River and Gulf Coast of the United States) (see Thomason 2018, p. 74). In other cases, the identity function is developed by contact languages later (Lee 2018), especially those that are eventually acquired as first languages. For example, Hawai'i Creole is viewed as a marker of solidarity and local culture (Drager 2012), as Haitian Creole is a representation of Haitian identity and culture (Buchanan 1979). The loss of a contact language can thus represent a loss of ethnic and/or cultural identity.

It is often said that traditional, indigenous languages encode valuable information about the local knowledge and ecosystem (Clatchey 2018, Harrison 2010, Nettle & Romaine 2000). For example, Nettle & Romaine (2000, p. 167) mention the Haunóo people of the Philippines, who have four different terms for soil firmness, nine color terms that distinguish soil types, five classifications for land topography, and three others for slope; the authors conclude that this information would be most valuable for those with an interest in preserving the ecosystem. Contact languages also can encode various types of local knowledge. For example, Kallawaya, which many cite as an example of an indigenous language that encodes local knowledge (UNESCO 2008), is actually a Quechua-Puquina mixed language (Bakker & Maarten 1994, Matras 2009). The mixed language, spoken in the highlands of Bolivia, encodes over 900 species of medicinal plants (Girault 1989) and is considered severely endangered (Hauk & Heaton 2018). In addition to ecological and botanical knowledge, contact languages (as with any noncontact language) can also encode other types of knowledge, such as cultural knowledge. Lee (2018) highlights the case of the Baba Malay-speaking community formed via early intermarriages between Chinese traders and indigenous women in the Malay Archipelago. This community is said to have preserved Southern Chinese ancestral worship practices better than in the Southern Chinese provinces themselves because of a cultural revolution that took place in China (Sankar et al. 2016). Now that the language is critically endangered, cultural concepts encoded in the language, such as datok dapur 'a deity that traditionally

guards over the kitchen' and *pai tigong* 'the ritual of praying to the sky god,' are at risk of being lost. Thus, "as with the loss of any noncontact language, the world loses knowledge and ways of looking at itself when a contact language is lost" (Lee 2018, p. 74).

The knowledge argument can and must be extended to linguistic knowledge (Lee 2018, p. 74). Some scholars are of the opinion that contact languages such as creoles are typologically distinct and unique from noncreoles (McWhorter 2005, Bakker et al. 2013), which may position contact languages as a unique category of languages to preserve. But the situation is complex, and studies such as these rely heavily on simplification in grammar. Other scholars instead focus on continuity between creoles and their component languages (DeGraff 2005) and the complexity in the sociolinguistic makeup of creoles (Mufwene 2001, Ansaldo 2017). Regardless, just as indigenous languages should be conserved because they represent linguistic diversity and demonstrate the extent of what is possible in human cognition, so too should contact languages. To grasp the range of all that is possible in human languages, linguists aim to learn all there is to know about all language stocks in the world, including isolates (Whalen & Simons 2012). Extending this argument to contact languages, each unique mixture of language can and possibly should be considered its own stock. And just as each language within a stock or each indigenous endangered language (not always quite the same thing) provides part of the whole picture of what humans are capable of, so can contact languages. In the case of Baba Malay (the main components of which are Malay and Hokkien), registers unique to Malayic languages are observed and operationalized in a way that is unique to Baba Malay. Baba Malay speakers differentiate between coarse and refined word forms: Coarse forms end with -al, -ar, and -as, while refined forms end with -air—for example, in the word pair nanas 'pineapple (coarse)' and nanair 'pineapple (refined)' (Lee 2014). As Evans & Levinson (2009) argue, the world's 7,000 or so diverse languages are a natural laboratory supporting and verifying exciting possibilities (many of them previously unknown or thought impossible), such as coarticulations and positionals. Similarly, each contact language contributes information about the range of possibilities of intensive contact-induced change. Some of the possible questions Lee (2017) asks include the following: What happens when tone languages are mixed with nontone languages, as in the case of Baba Malay? How are complex kinship systems maintained, adapted, or expanded in cases in which one of the component languages has a complex kinship system, as in the case of Wutunhua, which derives the bulk of its lexicon from Chinese (Sandman 2016)? What happens when a contact language is formed from a component language with clear word classes and one with less clear word classes, as in the case of Malacca Portuguese Creole, the component languages of which are Portuguese and Malay? As more research has demonstrated, it is not always a case of simplification [see the volume edited by Aboh & Smith (2009)]. The possibilities are as complex as they are endless. An estimated 95.8% of contact languages are at some level of risk or already dormant (Lee 2018); if nothing is done to preserve or document the endangered ones, linguists might never know what all the intensive contact-induced possibilities are. In a response to the general language endangerment problem, Krauss (1992, p. 10) ends with a plea: "Obviously we must do some serious rethinking of our priorities, lest linguistics go down in history as the only science that presided obliviously over the disappearance of 90% of the very field to which it is dedicated." The same can be said of the field of contact linguistics. Much rethinking can be done, and more attention can be paid to the endangerment of contact languages, lest the subfield go down in history for the exact same reason.

### 5. WHAT IS BEING DONE, AND WHAT MORE CAN BE DONE?

Documentation and revitalization projects are beginning to involve more contact languages. Documentation in this sense refers to the creation of a comprehensive, permanent, multipurpose, and

functional record of a language, often associated with archival materials (Himmelmann 2006) and also associated with language description, which produces grammars, dictionaries, and collections of texts (Austin 2016). Documentation projects known to the author have focused on contact languages such as Wutunhua (Acuo 2004), Sri Lanka Malay (Lim & Ansaldo 2006), Malacca Portuguese Creole (Pillai 2011), Michif (Sammons 2011), Media Lengua (Stewart 2013), Baba Malay (Lee 2014), Trinidad French Creole (Ferreira 2015), Light Warlpiri (Queen & O'Shannessy 2014), Gurindji Kriol (Meakins 2009), Anglo-Romani (https://romani.humanities.manchester.ac.uk/ atmanchester/projects/angloromani.shtml), and Sri Lanka Portuguese (Cardoso 2017). A number of these documentation efforts are focused on countries in Asia and the Pacific, although this is not an exhaustive list. Some revitalization efforts that focus on contact languages include projects on Venezuela French Creole (Ferreira 2009), Louisiana French Creole (Cockerham 2012), Michif (Iseke 2013), Trinidad French Creole (Ferreira 2015), Macanese Patuá (Larrea 2016), Malacca Portuguese Creole (Pillai et al. 2017) [or Kristang as the language is referred to in Singapore (Wong 2019)], and Baba Malay (Lee 2019). The range and scope of these revitalization projects vary and may entail the implementation of language classes (often unofficial given the status of the contact language within the community), the use of the language in performances, and the creation of reading material in the language.

Clearly, a number of contact languages are at risk and require documentation and revitalization, taking into account that contact languages are disproportionately marginalized and threatened compared with noncontact languages. The challenges and difficulties that each contact language community faces are unique, but a majority also share underlying currents, such as the overgeneralization that contact languages themselves contribute to the language endangerment problem and the battle for authenticity among all the world's endangered languages. The strength of language revitalization efforts may lie in numbers and shared solutions so that linguists can better help preserve and revitalize these contact languages if the communities so wish.

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