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Mixed Languages

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1. Introduction

Mixed languages[1] are a type of contact language that result from two or more languages combining in a situation of multilingualism. They arise during times of significant social change, serving as an expression of a new identity or the maintenance of an older identity. Their dual linguistic parentage or "genetic ambiguity" (Thomason & Kaufman 1988) means that mixed languages cannot be classified genetically according to the Stammbaum descent model.

Beyond this general definition, mixed languages are difficult to characterize on socio-historical or typological grounds. They form in different types of socio-historical situations. Speakers may be the descendants of migrants or groups who underwent colonial incursions; they may be the children of mixed marriages or the descendants of an ethnic community undergoing language shift. Similarly, there is no single typological profile of a mixed language. They fall into three categories roughly: (i) Lexicon-Grammar (LG) mixed languages, where one language provides the grammar and another language contributes large amounts of vocabulary, for example Media Lengua and Angloromani (cf. Muysken, this volume); (ii) structural mixes where both languages contribute significant amounts of grammatical (and lexical) material to the new language, for example

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[1] Mixed languages are also called "bilingual mixed languages" by Thomason (1997c), "split languages" by Myers-Scotton (2003), "fused lects" by Auer (1999), and "intertwined languages" by Bakker & Mous (1994). For consistency we use the term "mixed language," which is the most widely used term.

Glossing abbreviations used in this chapter: ABL=ablative, ABS=absolutive, ALL=allative, ACC=accusative, BEN=benefactive, COMP=complementiser, CONV=converb, DAT=dative, DET=determiner, DIM=diminutive, DIR=directional, F=feminine, FOC=focus, FUT=future, GEN=genitive, ILL=illative, IMP=imperative, IMD=immediate, IMPF=imperfect, IRR=irrealis, LOC=locative, M=masculine, OBJ=object, OBV=obviative, NOM=nominative, PERF=perfect, PL=plural, POSS=possessive, PROG=progressive, PRS=present tense, PRT=preterit, PST=past tense, SG=singular, SP=Spanish origin, SS=same subject, TOP=topic, TR=transitive, VAL=validator.

Gurindji Kriol and Michif; and (iii) converted languages where a language maintains its lexicon but undergoes structural convergence with another language, for example Sri Lanka Malay (Bakker 2015).

Historically, mixed languages were not considered autonomous language systems and were often dismissed as cases of code-switching, creolization, or adstrate influence. They were brought to the attention of linguistics again by Thomason & Kaufman (1988). As a result, a number of edited volumes drew together substantial amounts of mixed language data (Bakker & Mous 1994, Matras & Bakker 2003b, Thomason 1997d); and Bakker's (1997) *A language of our own* provided the first detailed account of a mixed language: Michif. More recently, Michaelis et al. (2013) have provided sketches of some languages, and a number of monographs and edited volumes now provide detailed accounts of Ma'á (Mous 2003b), Gurindji Kriol (Meakins 2011b), and Sri Lanka Malay (Nordhoff 2009, 2012). In addition, four substantial review papers, a bibliography, and textbook chapter explore the theoretical implications of mixed languages (Bakker 2013, 2015, Matras & Bakker 2003b, Meakins 2013b, 2018, Winford 2003: chapter 6).

The notion of LANGUAGE AUTONOMY is important to the identification of a mixed language. It refers to the ability of the language to function as a standalone linguistic system with only minimal continuing input from its source languages (Bakker 2003). Following de Saussure (1983 [1916]: 86), the parts of a language must be "synchronically interdependent." Thus, changes in the source languages do not feed into the mixed language and vice versa. This level of autonomy is difficult to demonstrate, given that there is often a close synchronic and diachronic relationship between mixed languages and other mixing practices, for example code-switching. Many mixed languages, referred to as "symbiotic mixed languages" (N. Smith 2000), also exist alongside one or both of their source languages. Nonetheless a number of independent developments of the source languages or mixed language have been demonstrated, including Light Warlpiri (O'Shannessy 2013), Gurindji Kriol (Meakins 2012), Bilingual Navajo (Schaengold 2003), and Sri Lanka Malay (I. Smith, Paauw & Hussainmiya 2004). Other measures of autonomy have also been proposed, including the stability of the language and children targeting the language in acquisition. These criteria are discussed in detail in Meakins (2013b).

The mixed languages we focus on can be contrasted with pidgin and creole languages, as well as code-switching, through a number of criteria. They are created in situations where a common language already exists and communication is not at issue, whereas pidgin and creole languages are borne out of the need for communication between people from a number of language groups (Golovko 2003: 191, Muysken 1997b: 375). As a result, pidgin and creole languages are formed from (usually) one dominant lexifier that came in contact with a number of different languages, which contribute to varying extents to the grammar and phonology (cf. Aboh & DeGraff, this volume). By contrast, mixed languages have two clear sources.

Pidgin and creole languages are partly also the result of successive generations of second language learners targeting the lexifier language, rather than a situation of bilingualism without a definite target, which is the case for our mixed languages. Code-switching, on the other hand, is also found in bilingual contexts; however mixed languages show more stability, i.e. predictability, in the sites of switches and have developed new structures that are not reflected in either source language.

This chapter begins with an overview of languages that have been classified in the literature as mixed (Section 2) and presents representative case studies of a number of them within a typological classification (Section 3). It then discusses their contemporary functions (Section 4.1), their socio-historical origins (Section 4.2), and the linguistic processes (Section 5) that led to their genesis. Much of this discussion focuses on the lexicon and morphosyntax of these languages. Section 6 provides a detailed discussion of the phonology of the mixed languages. As will be shown, mixed languages originate from a range of socio-historical settings and linguistic processes that do not obviously predict the resultant shape of the language.

2. An Overview of the Descriptive Literature on Mixed Languages

Table 12.1 lays out examples of contact varieties that have been labeled as mixed languages, excluding pidgins and creoles. Table 12.1 is meant as an overview of the literature rather than a definitive statement on the categorization of these languages, because the status of a number of these languages is questionable. For example, Barranquenho, spoken near the Portugal–Spain border, evolved from very closely related languages; so the extent of horizontal versus vertical transmission is difficult to ascertain. It is most likely a dialect of Portuguese with some Spanish influence, such as clitic placement, rather than a mixed language. The distinction between creoles and the mixed languages we discuss is also not always clear. Sri Lanka Malay is generally considered a mixed language, but has also been called a creole language by Smith & Paauw (2006). Conversely, Papiamentu is generally classified as a creole but has been reanalyzed as a mixed language by Jacobs (2012). Bakker (2015) has an extensive discussion of these cases.

3. Typology of Mixed Languages

Mixed languages are typologically diverse but can be broadly categorized as lexicon–grammar (LG) languages (Section 3.1), structural mixes (3.2), or converted languages (3.3). For more refined categorizations, see Bakker (2003, 2015).

Table 12.1: *Languages that have been identified as mixed languages*

Language	Country	Ethnicity of speakers	Mix	Sources
Angloromani	England	Romani	Grammar: English Lexicon: English and Romani	Bakker 1998, Boretzky & Igla 1994, Hancock 1970, 1976, Matras & Bakker 2003a, Matras et al. 2007, Smart & Crofton 1875, Thomason 2001
Barranquenho	Border of Spain and Portugal	Barranquenho	Grammar and lexicon: Portuguese with some Spanish influence	Clements 2009, Clements, Amaral, & Luís 2008
Callahuaya (Kallawaya)	Bolivia	Callahuaya Traveling Healers	Lexicon: Puquina Grammar: Quechua	Hannß & Muysken 2014, Juárez 1998, Muysken 1994a, 1997a
Chindo	Indonesia	Peranakan Chinese	Lexicon: Malay Grammar: Javanese	Matras & Bakker 2003a, Dreyfuss & Oka 1979
Domari	Iran, Egypt, Palestine	Dom	Lexicon and grammar: Indic and Arabic	Matras 1999, 2007, 2012
Gurindji Kriol	Australia	Gurindji	VP: Kriol NP: Gurindji Lexicon: mixed	McConvell 2008, McConvell & Meakins 2005, Meakins 2007, 2008a, 2008b, 2009, 2010, 2011a, 2011b, 2011c, 2012, 2013a, 2015, 2016, Meakins & Algy 2016, Meakins, Jones, & Algy 2016, Meakins & O'Shannessy 2005, 2010, 2012, O'Shannessy & Meakins 2012
Island Carib (Igneri)	Lesser Antilles (Caribbean)	Island Carib men	Grammar: Arawak Lexicon: some Carib	Hoff 1994, Taylor & Hoff 1980
Javindo	Indonesian	Javanese mothers, Dutch fathers	Grammar: Dutch Lexicon: Dutch and Javanese	M. de Gruiter 1994, V. de Gruiter 1990
Jenisch	Germany	Jenisch traders	Grammar: German Lexicon: Rotwelsch,[a] Hebrew, Romani, Romance	Matras 2000, 2003, 2009
Lekoudesch	Germany	Jewish cattle traders	Grammar: Judeo-German Lexicon: some Hebrew	Matras 2000, 2003, 2009
Light Warlpiri	Australia	Warlpiri	VP: Ab Eng/Kriol NP: Warlpiri Lexicon: nouns mixed, verb Kriol	Meakins & O'Shannessy 2005, 2010, 2012, O'Shannessy 2005, 2006, 2008, 2009, 2011a, 2011b, 2012, 2013, 2016,

Table 12.1: (*cont.*)

Language	Country	Ethnicity of speakers	Mix	Sources
Ma'á	Tanzania	Mbugu	Grammar: Bantu Core lexicon: Cushitic	O'Shannessy & Meakins 2012 Brenzinger 1987, Mous 1994, 2000, 2003a, 2003b, Myers-Scotton 2003, Thomason 1997a, 1997d, Thomason & Kaufman 1988
Media Lengua	Ecuador	Quichua	Lexicon: Spanish Grammar: Quichua	Deibel 2019, Gómez Rendón 2008, Jarrín Paredes 2014, Lipski 2016, Muysken 1981, 1994b, 1997b, Myers-Scotton 2003, Stewart 2011, 2013, 2014, 2015a, 2015b, 2018a, 2018b
Mednyj Aleut	Bering Strait (Russia)	Aleut	VP (finite): Russian NP: Aleut Lexicon: Russian and Aleut	Golovko 1994, 1996, Golovko & Vakhtin 1990, Myers-Scotton 2003, Sekerina 1994, Thomason 1997b
Michif	Canada	Metis (French fathers, Cree mothers)	VP: Cree NP: French	Bakker 1994, 1997, Bakker & Papen 1997, Gillon and Rosen 2016, 2018, Myers-Scotton 2003, Papen 1987a, 1987b, 2003, 2005; Prichard & Shwayder 2014, Rhodes 1977, 1986, 1987, 2001, 2013, Rosen 2000, 2003, 2006, 2007, Strader 2014
(Bilingual) Navajo	United States	Navajo	Grammar: Navajo Lexicon: Navajo and English	Schaengold 2003
New Tiwi	Australia	Tiwi	VP: Tiwi NP: Aboriginal English/ Kriol	Lee 1987, McConvell 2002
Old Helsinki Slang	Finland	Finnish and Swedish gangs	Grammar: Finnish Lexicon: 80 percent Swedish	Ceniccola 2014, de Smit 2010, Jarva 2008, Paunonen 2006
Papiamentu	Curaçao (Caribbean)	West Africans	Upper Guinea Portuguese Creole with some Spanish lexicon	Jacobs 2012
Petjoh	Indonesia	Malay-speaking mothers, Dutch fathers	Grammar: Malay Lexicon: Dutch	Giesbers 1995, van Rheeden 1994
	Philippines	Chinese Filipinos		Gonzales 2017, 2018

Table 12.1: (*cont.*)

Language	Country	Ethnicity of speakers	Mix	Sources
Philippine Hybrid Hokkien			Lexicon: Hokkien/ Tagalog/English Grammar: Tagalog/ Hokkien Nominal: Hokkien/ Tagalog Verbal: Hokkien Maybe neither GL or VP	
Reo Rapa	Rapa Iti (French Polynesia)	Rapa	Old Rapa, Tahitian (both Polynesian)	Walworth 2015
Shelta	Ireland	Irish Travelers	Grammar: English Lexicon: Irish	Grant 1994
Sri Lanka Malay	Sri Lanka	Malay	Forms: contact variety of Malay Grammar: Tamil and Sinhala	Aboh & Ansaldo 2007, Ansaldo 2005, 2008, 2011a, 2011b, Bakker 2003, Nordhoff 2009, 2012, Slomanson 2006, 2007, I. Smith 2003, I. Smith & Paauw 2006, I. Smith, Paauw, & Hussainmiya et al. 2004
Sri Lanka Portuguese	Sri Lanka	Portuguese	Forms: contact variety of Portuguese Grammar: Tamil and Sinhala	Bakker 2003, I. Smith 1977, 1979a, 1979b, 1984, 2001
Takia	Karkar Island (PNG)	Takia	Lexicon: Austronesian Grammar: Waskia (Trans New Guinea)	Ross 2001, 2006
Wutun	China	Tibetan Buddists	Tibetanized variety of Northwest Mandarin with some Bonan (Mongolic) influences	Chen 1986, Janhunen et al. 2008, Lee-Smith & Wurm 1996, Sandman 2012, Sandman & Simon 2016

[a] Rotwelsch is camouflaged German, not an independent language.

3.1. Lexicon-Grammar (LG) Languages

Most mixed languages exhibit a split between the lexicon and grammar with respect to the source language. Bakker (2003: 125) calls these LG languages and lists 25 in a typological survey. LG languages differ in whether the ancestral or introduced language provides the grammatical structure. Those that select their grammars from the non-heritage language include Angloromani, Javindo, Kallawaya, and Ma'á, whereas those where the ancestral language provides the grammar include Bilingual Navajo, Media Lengua, Old Helsinki Slang, Papiamentu, and Wutun. Angloromani and Media Lengua are discussed in detail in Sections 3.1.1 and 3.1.2, respectively.

Just how much non-heritage lexical material is required to "qualify" as a mixed language is unclear, because the proportion is never 100 percent. At the extreme end, 89 percent of Media Lengua's vocabulary comes from the non-heritage language, Spanish (Muysken 1997b: 378, Stewart 2011: 37). The percentages are much lower for Angloromani, but the use of two parallel lexicons distinguishes these languages from normal borrowing scenarios. The use of parallel lexicons also differs from code-switching because the speakers are not bilingual; rather, they only have control over a second limited set of words or stems.

3.1.1. Angloromani

Angloromani is spoken by some Romani people in Britain and is considered endangered (Matras 2010). The Romani people continue to be a traveling population, many of whom live in caravans. Those who settled in permanent accommodation generally do not speak this mixed language (Matras 2010). Currently, Angloromani is not the language of conversation but rather is restricted to individual utterances. These utterances can be characterized as the use of a restricted set of heritage Romani lexicon, which Matras et al. (2007) call a "lexical reservoir," within an English grammatical frame. This lexical reservoir exists largely in parallel with English lexicon and is drawn on in situations where speakers want to mark a sense of solidarity or group cohesion.

Examples (1) and (2) illustrate utterances in which Romani words, such as the nouns *fowki* 'people' and *poshaera* 'penny' in (1), are inserted into an English frame. Almost the same is true of the pronouns *lesti* 'he' and *mandi* 'me' in (2). (Note that these pronouns are etymologically locative forms; however the case distinctions have been lost.)

(1)   The poor *fowki* that haven't got a *poshaera* to their name!
      The poor people who don't have a penny to their name! (Matras 2010: 115)
(2)   *Lesti*'s laughing at *mandi*.
      He's laughing at me. (Matras 2010: 114)

Verbs and function words such as *maw* 'NEG' are also common, although Romani verb inflections are no longer used. Some Romani morphology remains, such as the genitive *-engra* suffix, which attaches to lexical roots to create a related word: *masengra* (from *mas* 'meat'). Matras et al. (2007) also observe that Angloromani speakers do not always use the definite article, aspect and existential auxiliaries, and co-referential pronouns in places where they would be expected in English. However, they argue that these features are not specifically Romani; they simply indicate that Angloromani has slightly different grammatical rules from English.

It is likely that Angloromani developed after the Romani had already shifted to English, as an attempt to reclaim their heritage language through

the use of Romani words. However, Thomason & Kaufman (1988: 103–4) suggest that Angloromani is the result of the wholesale adoption of the English grammatical system coupled with the maintenance of lexical material from Romani. Romani has likewise fused with other European languages and evolved into other mixed languages (Carling, Lindell, & Ambrazaitis 2014).

3.1.2. Media Lengua

An example of a mixed language that retains the grammar of the ancestral language is Media Lengua. It is spoken by an estimated 2000 people in several communities throughout the Ecuadorian highlands. Fundamentally, the language demonstrates a clear split between Quichua grammatical and Spanish lexical elements (Dikker 2008, Gómez Rendón 2005, 2008, Jarrín Paredes 2014, Lipski 2016, Muysken 1980, 1981, 1997b, 2013a, 2013b, Stewart 2011, 2014, 2015a, 2015b). In most cases, the Spanish lexical items take on the semantic roles of their Quichua counterparts while also conforming to Quichua phonology – a process known as relexification (Muysken 1981). As noted above, the number of lexical replacements has been estimated at roughly 89 percent, based on a 200-word Swadesh list elicited by Muysken (1997b) and later by Stewart (2011). Percentages are higher when taking into account larger portions of the lexicon (93 percent according to Stewart 2015b, based on spontaneous speech data). Deibel (2019) also provides quantifiable experimental evidence in support of relexification as the foundation of Media Lengua's formation.

   The morphosyntactic frame of Media Lengua is essentially Quichua in origin and therefore agglutinating and predominantly following an SOV word order. Of the 63 grammatical elements found in Ecuadorian Quichua, Gómez Rendón (2008: 68) identifies at least 49 (77 percent), while Stewart (2015b: 28) identifies 55 (87 percent). Nouns inflect for case (nominative, accusative, locative, and other semantic cases) and number, while Spanish-based gender agreement is rarely productive. Similarly, verbs are inflected for tense, aspect, person, and number agreement for subjects. Free pronoun forms are derived from Spanish, but typically conform to Quichua patterns, viz., there is a marginally productive use of lexical gender and in/formal distinctions. Media Lengua also preserves phonological patterns of Quichua that have since changed in the region (e.g., the lack of post-nasal stop voicing). The following examples demonstrate the pattern of Spanish stems with Quichuan suffixes (italicized).

(3)   Mio   hermana=*ka*   mio   papa-*su-ta*   terreno-*man*
      1SG.POSS   sister=TOP   1SG.POSS   dad-DIM-ACC   land-DIR
      compaña-*shpa*   i-*ju-n*
      accompany-SS.CONV   go-PROG-3
      My sister accompanies my father to the plot of land. (Stewart 2015b: 29)

(4) Ahora=ka   sobre   vestimenta-*mi*   dezi-*gri-ju-ni*   uno
     now=TOP   ABOUT   clothing-VAL   say-FUT.IMD-PROG-1S   a
     poqu-ito-*go-ta*   vestimenta=*ka*   aqui
     bit-DIM.SP-DIM.Q-ACC   clothing=TOP   here
     nuestro   pueblo   *Kayambi-pa=ka.*   Nosotros indigena-*kuna-pa=ka*
     our   town   Cayambe-GEN=TOP   our   indigenous-PL-GEN=TOP
     anaco   prens-*ada-mi*   centro ahora=*ka*   dezi-*nchi.*
     skirt   press-PRT.SP-VAL   center now=TOP   say-1.PL
     Mas antes=*ka*,   anaco dezi-*na-mi*   ese   nuestro   abuelo-*kuna,*
     more before=TOP   skirt say-INF-VAL   this   our   grandparent-PL
     ese   anaco-*kuna=ka*   de lana   de borrego-*mi*   *ka-shka*
     this skirt-PL=TOP   of wool   of sheep-VAL   be-PST
     dezi-*n*   y   mas   pes-*ado*   anaco-*kuna*...
     say-3   and more weight-PRT.SP   skirt-PL
     I'm going to talk a little bit about the traditional clothing of our people from
     Cayambi. Nowadays, our indigenous *anaco*[2] skirts are called "centre-pressed"
     skirts. In the past, it was said that our grandmothers' *anaco* skirts were made of
     sheep wool and weighed a lot more. (Stewart 2013: 14)

The two most studied dialects of Media Lengua are found in the province of
Cotopaxi (Muysken 1980, 1997b) and two provinces to the north in Imbabura
(Gómez Rendón 2005, 2008, Stewart 2011, 2015b). It is thought that both
developed through intense contact between Spanish and Quichua in the
early twentieth century (Gómez Rendón 2005 for Imbabura; Muysken
1997b: 374 for Cotopaxi), though the origins remain relatively elusive, espe-
cially in Imbabura. Stewart (2015b) notes that the construction of the
Ecuadorian railway between 1915 and 1929 may have brought Media
Lengua speakers north to Imbabura. This can be seen in Cotopaxi surnames
in the area and several linguistic similarities, which are difficult to dismiss as
chance innovations. In Cotopaxi, Muysken (1997b) proposed that many
young men started working in the construction industry in a nearby provin-
cial town and learning Spanish. This was the group that created Media
Lengua. Muysken claims that the genesis of this mixed language occurred
because speakers did not fully identify with traditional Quichua culture or
the urban Spanish culture. In Imbabura, on the other hand, Media Lengua
speakers fully identify as Indigenous and not as Mestizos (J. Lipski, p.c.,
August 2015, Stewart 2015b).

  Recent surveys of Cotopaxi (Shappeck 2011, Stewart 2011) suggest that
Media Lengua is no longer spoken, or at least is very rare in the region. In
Pijal, Imbabura, where the Imbabura dialect originated, only people aged
roughly 40 and above speak it, while younger residents are either Spanish
monolinguals or passive bilinguals (Stewart 2011). Within a short 10-
minute bus ride from Pijal, however, Media Lengua appears to be quite
healthy in the communities of Angla and Casco Valenzuela, where children
are still acquiring the language.

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[2] The name of a specific skirt worn by many of the Kichwa women in the Andes.

3.2. Structural Mixes

Other mixed languages demonstrate more structural fusion, as the following sketches of Michif and Gurindji Kriol demonstrate. In these languages, the source languages combine to create a composite morphosyntactic frame. On the surface, these languages bear a striking resemblance to code-switching and indeed most likely originated in codeswitching.

3.2.1. Michif

Michif is the result of a community in which mixed marriages were common between Plains Cree-speaking women and French Canadian fur traders. Its genesis probably occurred in the early nineteenth century, from the speech of bilingual children of nomadic families in the Red River Colony area, now Manitoba and North Dakota (Bakker 1997).

Michif shows a great degree of structural mixing. In this case, the locus of mixing occurs between the verb and noun systems. The verb system is from Cree (Algonquian, polysynthetic), which has four verb classes (in/transitive and in/animate) and affixes that mark a number of grammatical functions (e.g., clause type, tense/mood, voice/valency/direction/aspect, person and number agreement). On the other hand, the nominal phrase reflects that of French, including constituent order (Det-Adj-N or Det-N-Adj) and limited productivity in article and adjective gender agreement.

The language division of the noun and verb structures extends to the lexicon. Michif is composed of 83–94 percent French nouns and 88–99 percent of Cree verbs, depending on the speaker. Interrogatives, postpositions, demonstratives, and personal pronouns are mostly Cree; and prepositions, adjectives, possessive pronouns, and numerals are almost exclusively French. The French (NP) vs. Cree (VP) split is clearly demonstrated in (5) and (6). Cree elements are italicized.

(5) *êkwa pâstin-am* sa   bouche *ôhi*   le   loup *ê-wî-otin-át*
    and open-he.it his.F mouth this.OBV the.M wolf COMP-want-take-he.him
    And when the wolf came to him, he opened his mouth. (Bakker 1997: 5)

(6) Le   per   *ki:*-li-bin-*i-w*   li   mu:d
    M.SG priest PST-M.SG-bless-INF-TA.3SG   M.SG   people
    The priest blessed the people. (Bakker 1997: 116)

As with all mixed languages, the origin of Michif is a matter of speculation. The normalization of French–Cree code-switching has also been invoked by Drapeau (1991) to explain its split, although Bakker (2003: 129ff.) argues against this for three primary reasons: (1) the difference in quantity of lexical material transferred during the mixed-language formation far exceeds that in languages with abundant code-switching; (2) the nature of the embedded lexicon within a code-switching matrix differs from that of a mixed language (i.e., borrowed lexicon in a CS matrix is typically not from

the core lexicon, while in an ML it is); and (3) the lack of documentation of a transitory code-switching phase before the mixed language was established.

3.2.2. Gurindji Kriol

Gurindji Kriol is another example of a mixed language, which shows a VP–NP structural split according to its source languages. It is spoken by Gurindji people in northern Australia and derives from Gurindji (Pama-Nyungan) and Kriol (English-lexified creole). Gurindji Kriol originates from a language shift situation where there was extensive contact between non-Indigenous colonists and Gurindji people on a cattle station where the latter worked under slave-like conditions (Charola & Meakins 2016). Code-switching provided a fertile ground for the formation of this mixed language, which is now the first language of all Gurindji people under the age of 40 (McConvell & Meakins 2005, Meakins 2011b).

Structurally, Kriol contributes much of the verbal grammar, including tense and mood auxiliaries, and transitive, aspect, and derivational morphemes. Gurindji supplies most of the nominal structure, including case and derivational morphology (Meakins 2011a, 2011b). In this respect, the structure of Gurindji Kriol is quite similar to the VP–NP split seen in Michif; however, unlike Michif, nouns and verbs in Gurindji Kriol also come from both source languages.

In terms of the lexicon, Gurindji Kriol derives its lexicon relatively evenly from both languages. Based on a 200-word Swadesh list, 36.6 percent of vocabulary comes from Kriol, including nouns for colors and parents and their siblings, some animals and plants, and the most basic verbs; and 35 percent of vocabulary originates in Gurindji, including nouns for artefacts, body parts, siblings, grandparents, and in-laws, as well as most animals and plants, and verbs denoting impact, motion, and body functions. The remaining 28.4 percent contain synonymous forms from both languages (Meakins 2011b: 19). Some extracts are given below. Gurindji elements are in italics.

(7) I=m   teik-im   *rarraj*   det *karu=ma*   *nyanuny*
    3SG.S=PRS take-TR   run   the child=TOP   3SG.DAT
    ngarlaka-ngka   *an*   *warlaku*   *kanyjurra-ngka.*
    head-LOC   and   dog   down-LOC
    dat diya-*ngku*   i   bin *jak* im   na   *karu* an   *warlaku*
    the deer-NOM   3SG.S   PST fall   3SG.O   FOC   child   and dog
    Kanyjurra-k,   klif-*nginyi=ma.*
    down-ALL,   cliff-ABL=TOP
    [The deer] takes the child running on its head, with the dog below.
    The deer threw the child and the dog downwards off the cliff.
    (Meakins 2011b: 18)

Both languages also contribute small amounts of grammar to the systems they do not dominate. For example, the Gurindji continuative suffix is

found in the VP, and Kriol determiners are common in the NP. Gurindji Kriol also has Kriol SVO word order, although Gurindji information structure also determines word order to some extent (Meakins 2009, Meakins & O'Shannessy 2010). Complex clauses are constructed using both Gurindji and Kriol strategies, for example coordinating and relative clauses use Kriol conjunctions and relative pronouns; and subordinate clauses are formed using Gurindji case and factive markers. New structures have also developed, such as an asymmetrical serial verb construction (Meakins 2010); and some old structures have undergone change. For instance, the ergative marker is now an optional nominative marker with discourse functions (Meakins 2015), while the locative marker also marks the progressive in presentational clauses (Meakins 2016).

3.3. Converted Languages

Converted languages develop when the ancestral language maintains its lexicon but undergoes a complete restructuring of its morphosyntax, which is patterned on that of a non-heritage language. They differ from the previous categories of mixed languages in that all of the surface forms including lexicon and morphology come from the heritage language. Converted languages are the result of a process that Ross (2006) calls *metatypy*, which is the typological restructuring of one language on the model of another while maintaining its native lexicon and morphology (discussed further in Section 5.3). Sri Lanka Malay (Section 3.3.1), Sri Lanka Portuguese, and Takia are examples of converted languages.

3.3.1. Sri Lanka Malay

Sri Lanka Malay is spoken in a number of communities in Sri Lanka by the Malay minority who migrated from the Malay Archipelago centuries ago. Lexically, Sri Lanka Malay consists almost entirely of words from a Malay-based trade language called Vehicular or Bazaar Malay (Austronesian) (Smith, Paauw, & Hussainmiya 2004). However, it has been heavily restructured under the influence of Tamil (Dravidian) and, more recently, Sinhala (Indo-Aryan), owing to sustained social contact with Tamil-speaking Moors and pervasive Malay-Tamil bilingualism among Malay descendants. The result is a language that is unintelligible to Malay speakers in the Malay Archipelago, despite its Austronesian lexicon (Ansaldo 2008, Nordhoff 2009).

Structurally, Sri Lanka Malay has evolved from an isolating language to an agglutinating one under the influence of Tamil, from which it has also acquired an SOV word order, postpositions, pre-nominal determiners, and adjectives (Ansaldo 2008, 2011a, 2011b, Hussainmiya 1986, Nordhoff 2009, 2012).

(8) *Sir* *anak-pada-yang* *ruuma-nang* *e-luppa*.
  teacher child-PL-ACC house-DAT PST-send
  The teacher sent the children to school. (Ansaldo 2008: 27)

(9) *Maana-ka   kuuli   perajan   ara-kerja*
     where-LOC daily.wage work   PRS-do
     Here do they do daily wage work? (Smith & Paauw 2006: 164)

The Sri Lanka Malays are descendants of immigrants who were brought to Sri Lanka at different times by Dutch (1656 onwards) and British colonists (1796 onwards). Although they are called Malays, they came from a number of places, including Banda, Balu, and Java, connected especially by their Malay trade language. Traditionally they have maintained close ties with Muslims who are Tamil speakers.

There are different views on how Sri Lanka Malay developed. The first is that it was creolized by the children of mixed marriages between Malay men who spoke a Vehicular Malay and Tamil-speaking Moor women. Smith & Paauw (2006) suggest that the mothers tried to make Malay the language of the home and children then nativized the Malay pidgin. Smith (2012) later emphasizes the role of untutored L2 acquisition in the development of Sri Lanka Malay as a creole language. In this scenario, the children were learning an L2 variety of Malay from their Tamil-speaking Moor mothers. I. Smith & Paauw (2006) propose that this whole process occurred before Malay was reintroduced by the British in schools between 1802 and 1873, therefore creating a diglossic situation. During this period Sri Lanka Malay had extended contact with the Malay language (Smith, Paauw, & Hussainmiya 2004).

An alternative theory is presented by Bakker (2003, 2012) and Ansaldo (2008, 2011a), who interpret the structural outcome of Sri Lanka Malay as a converted language, which developed through a process of metatypy where Malay forms were restructured under the influence of Tamil and, to a lesser extent, Sinhala (see Section 5.3). Under this hypothesis, the Malays did not intermarry with the Moor women but were segregated. Furthermore, they must have been highly multilingual in order for such a pervasive restructuring to have taken place. In particular, Bakker (2012) presents evidence from a study on the molecular genetics of Sri Lanka populations, which suggests that there has been little intermarriage between Malays and Tamils; thus, the Malay speakers have retained their pre-Sri Lanka genetic profile (Papiha, Mastana, & Jayasekara 1996). This observation suggests that Tamil and Sinhala would have been present but external to the Malay community, and thus they were not acquired by the latter. This picture does not support an abrupt nativization hypothesis (associated by some with creolization) but rather suggests change that took place over an extended period of contact.

4.   Social Functions and Origins of Mixed Languages

The following sections consider commonalities in the social functions of mixed languages (4.1) and the socio-historical contexts of their genesis (4.2).

4.1. Functions of Mixed Languages

Many mixed languages are spoken by new ethnic groups. Some of these groups find their origins in mixed marriages. For example, Michif speakers are the children of Cree mothers and French fathers. They call themselves *Métis*, a French word that denotes their mixed genetic ancestry. Some other mixed languages are spoken by people who do not constitute a separate ethnic identity and regard their language as emblematic of a continuing ancestral heritage. For example, speakers of Media Lengua do not distinguish themselves ethnically from Quichua speakers, although their children (non-Media Lengua speakers) identify to some extent with the urban Spanish-speaking society. Speakers of Gurindji Kriol also do not separate themselves from Gurindji speakers in general and often refer to their mixed language as "Gurindji" (Meakins 2012: 109). This mixed language represents an attempt to maintain Gurindji under the continuing colonial pressure of English from which Kriol emerged.

4.2. Socio-Historical Origins of Mixed Languages

Although mixed languages emerge in one of three socio-historical settings, viz., mixed marriages, migration, or a cultural incursion, none of these contexts is particular to the formation of the mixed languages that we focus on. For example, creolization and language shift can occur in colonial settings, and bilingualism and code-switching are found in contexts of migration and colonization.

Children of mixed marriages in situations of migration and colonization are said to form their own distinct cultural identity, which is indexed by the mixed language. Michif is the classic example of a mixed language born from mixed marriages. The second and third categories involve cases where no mixing of ethnic groups has occurred but rather one has dominated the other. This can happen when a minority population has migrated to a new region where it is dominated by, or became powerless in relation to, another group, as in the case of the Malay speakers in Sri Lanka. People may have migrated to a new region to escape persecution or for economic reasons, as was the case for Angloromani. They also might have been brought by another group, for example Sri Lanka Malay. In other cases, mixed languages arise when groups are colonized and become minorities in their own country. Gurindji Kriol developed as a result of the invasion of Australia by British colonists.

5. Structural Processes Involved in Mixed Language Genesis

As shown in Section 3, mixed languages are typologically diverse. This diversity is a reflection of both the particular kinds of languages that came in contact and of the linguistic diversity of processes that produced them. While some outcomes are extended practices of borrowing and code-switching, others

Table 12.2: *Processes that lead to the formation of mixed languages*

	Form	Structure	Example
Borrowing/cs	Borrow	Borrow	Gurindji Kriol Angloromani Michif
Relexification	Borrow	Maintain	Media Lengua
Metatypy	maintain	borrow	Sri Lanka Malay

evolved through relexification, or through metatypy. These processes can be distinguished by whether the form or structure of the source languages is replicated. Mixed languages, which are the result of code-switching or borrowing, replicate both forms and structures from their source languages in the resultant mix. On the other hand, mixed languages that find their origins in relexification replicate only form, and those that emerge through metatypy, only structure (see Table 12.2).

5.1.   Borrowing and Codeswitching Accounts

The genesis of most LG and structurally mixed languages lies in large-scale borrowing or code-switching. In the case of Gurindji Kriol, empirical evidence exists for a code-switching genesis scenario (McConvell & Meakins 2005). Borrowing and codeswitching involve the replication of lexical and morphological material from one language into the another language (Thomason & Kaufman 1988, Myers-Scotton 2003). For a detailed discussion of different transfer scenarios and the history of code-switching approaches, see Meakins (2013b).

Thomason & Kaufman (1988) base their theory of mixed language genesis on their borrowability scale of linguistic categories, which ranges from nouns, the most borrowable category, right through to relatively unborrowable structures such as inflectional morphology. The scale is implicational, viz., where derivational morphology has been borrowed, conjunctions have already been borrowed, etc. Borrowing is a consolidation of insertional code-switching practices where elements from one language are inserted into another language's morphosyntactic frame or matrix. Similar to Thomason & Kaufman, Myers-Scotton (2003) developed a scale of likely switches, with content words such as nouns easily switched and inflectional morphology impossible to switch.

Thomason & Kaufman (1988) suggest that mixed languages represent different degrees of transfer, with some borrowing only vocabulary and others borrowing almost entire grammatical systems (along with vocabulary). Similarly, Myers-Scotton (2003) theorizes the move from insertional codeswitching to a mixed language within her Matrix Language Frame model, labeling the transition the "Matrix Language Turnover Hypothesis." This hypothesis is concerned with the change in dominance of the participating languages. Myers-Scotton proposes that mixed languages arise when there is a

turnover underway that does not go to completion. According to Myers-Scotton, mixed languages may stop at different places, which explains why they surface in different forms and with the split in different places. For example, in Gurindji Kriol, both Gurindji and Kriol acted as matrix languages in the initial code-switching stage of the 1970s. Kriol became more dominant, functioning as the matrix language more often, and eventually this pattern fossilized into the mixed language (McConvell & Meakins 2005).

Under both borrowing and codeswitching accounts, mixed language formation may halt at the least disruptive end of the scale and exhibit only lexical borrowings. The LG languages are a good example because they are characterized by a clear division between the lexicon and the grammar. An example is Angloromani, where a subset of vocabulary from the ancestral language (Romani) is maintained as a lexical reservoir and exists in parallel with the lexicon of the grammar language (English). A contemporary process of paralexification replaces the vocabulary utterance by utterance. In this respect, paralexification occurs synchronically and is not a diachronic process; and although this process resembles codeswitching, paralexification does not require bilingualism. More controversially, Thomason & Kaufman (1988: 103–4) suggest that Angloromani is the result of the complete borrowing of the English grammatical system and vocabulary coupled with the maintenance of some vocabulary from Romani.

More convincing cases of structural borrowing are Michif and Gurindji Kriol, which contain inflectional morphology from both source languages. Other borrowings such as lexical and more minor structural borrowings are also present, as predicted by Thomason & Kaufman's (1988) implicational hierarchy of borrowing. For example, inflectional morphology from both French and Cree is present in Michif. Verbal inflections are derived from Cree, and in the NP, Michif preserves both French plural marking and adjectival agreement. Similarly, Gurindji Kriol combines Kriol, the language of the verbal inflectional categories (tense and mood markers), with Gurindji nominal inflections in the form of case marking, both syntactic (ergative, dative) and semantic (locative, allative, ablative).

The situation described for Michif and Gurindji Kriol is exceptional, given the empirical rarity of inflectional morphology transfer. Inflectional morphology is rarely borrowed and mostly derived from the more dominant language in insertional code-switching. Indeed Matras (2003: 158) suggests that a particular feature of mixed languages is the seemingly unconstrained borrowing of grammatical elements, which in the past have been labeled as "loan proof."

5.2.   Relexification

Relexification is a process involving the relabeling of lexical entries from one language to another (Lefebvre 2005, 2006, Lefebvre & Therrien 2007, Muysken 1981). It is a sub-type of borrowing where the form of a word or

affix is borrowed, but the semantics or functional distribution of the native counterpart remains the same. Relexification takes place on a large scale and involves the relabeling of substantial portions of an ancestral language's lexicon. This process, as opposed to *adlexification* in Shappeck's (2011) analysis of Quichua–Spanish contact, does not maintain synonymic or near-synonymic pairs from each language. According to Muysken (1981), the only essential information needed in the relexification process is the replacement of the phonological shell, while the transfer of other linguistic elements, known as *translexification* – e.g., semantic representation and syntactic, subcategorization and/or selectional features – is non-essential.

According to Lefebvre (2006, 2005), instead of the immediate relabeling of the ancestral language's phonological representation by that of the other language, both representations coexist simultaneously. After an indeterminate amount of time, the original phonological representation falls into disuse in favor of the introduced language. At this stage, the lexical entry of the source language is made up of mixed elements from each language. Lefebvre also makes it clear that the phonological representation of the target language is adapted to the phonological grammar of the source language. For example, the phonological shell of the Spanish word *quer-er* 'to want, to love' adopts the semantic features of the Quichua word *muna-na* 'to want, to like, to love, to enjoy', while conforming to Quichua phonotactics as in *kiri-na* [kiˈɾina] (Stewart 2011: 57). See the verbs *gusta* 'like' and *muna* 'like/want' in (10):

(10) Spanish: *Te   gusta   pescado frito?*
                   2.OBJ like.3SG fish   fried

      Quichua: *Chaluwa frei-shka-ta   muna-ngi-chu?*
                   fish   fry-PRT-ACC like/want-2-Q

  Media Lengua: *Pescado cozna-shka-ta   kiri-ngi-chu?*
                     fish   cook-PRT-ACC like/want-2-Q

    'Do you like fried fish?' (Stewart, personal database)

5.3.   Metatypy

Converted languages are the result of the diachronic process of metatypy, which is the typological restructuring of one language on the model of another while maintaining its forms (Ross 2006: 95). The language that undergoes restructuring is emblematic of the speech community's identity, viz., their ancestral language, and the language whose structures are borrowed is the one used to communicate with the other speech community (Ross 2001: 146).

Sri Lanka Malay is most likely the outcome of metatypy. It maintains Malay vocabulary and morphology, while its morphosyntax is patterned on Tamil. According to Smith, Paauw, & Hussainmiya (2004), Malay prepositions have become postpositions on the model of Tamil's suffixing and dependent-marking patterns.

6.   Phonology

Traditional phonological analyses (Bakker 1997, Muysken 1997b) and theoretical accounts (van Gijn 2009) of mixed languages suggest that their phonologies can be predicted based on their morphosyntactic arrangements. That is, mixed languages have two prototypical arrangements. In the first, words systematically adopt the phonological structure of the language that provides the grammar (e.g., in Media Lengua); while in the second, they preserve the phonological shape from the language they were selected from (e.g., Michif). In the case of LG mixed languages (Section 3.1), the phonology is considered part of the grammatical system. Lexical items from language A are regularized to the phonology of language B, the source of the grammar. Therefore, the Spanish lexicon in Media Lengua should sound like that of Quichua. For the structural mixes (Section 3.2), Michif is often analyzed as having two coexisting phonologies, with the French phonology applying to French-derived elements and Cree phonology to Cree-derived ones (Bakker 1997, Rhodes 1986). In the case of converted languages (Section 3.3), little information exists on the phonology of Sri Lanka Malay. However, detailed work on a similar language, Sri Lanka Portuguese, which derives its forms from Portuguese but its structure from Tamil, shows the vowel system to be of Portuguese origin, at least regarding the number of the vowels and their places of articulation. On the other hand, it has eliminated the nasal/oral contrast found in Portuguese in favor of the length contrast in Tamil (I. Smith 1978).

Drawing on descriptions of Media Lengua, Callahuaya, Mednyj Aleut, and Michif, van Gijn (2009) claims that the phonological arrangement of mixed languages can be reasonably predicted based on the unmixed phonological domains that directly correspond to their place on the prosodic hierarchy.[3] According to Van Gijn, agglutinating mixed languages, like Media Lengua, appear to conform to the phonology of the grammar's source language, because nearly all words contain morphosyntactic elements from both languages (e.g., in Media Lengua, Spanish stems and Quichua morphosyntax predict Quichua imposes its phonology and not Spanish). Michif, a highly synthetic language on the Cree side and fusional on the French side, contains a greater degree of "unmixed" words, because the verb phrases, Cree-based, remain syntactically separate from noun phrases, largely French-based. Because of this division of labor, van Gijn claims that French phonological rules can apply to the French-derived elements while Cree phonological rules can apply to the independent Cree-derived elements. He then maps these observations onto the prosodic hierarchy. Here, because both Media Lengua and Michif contain elements from both languages at higher prosodic levels (e.g., the intonational phrase and above),

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[3] For additional information on the prosodic hierarchy, see Nespor & Vogel (1986).

there should be suprasegmental material from both languages. At the mid-levels (e.g., the phonological phrase and prosodic word), he claims Media Lengua should still conform to Quichua, since the language still shares elements with it at these levels, while Michif is still considered "divided." Finally, at the lower levels (e.g., syllable and foot),[4] van Gijn claims that both Media Lengua and Michif should be phonologically stratified (i.e., syllables and feet are predicted to share elements from both source languages based on their respective language origin).

While van Gijn's (2009) analysis reflects various impressionistic aspects of the surface-level phonologies of mixed languages, it falls short at predicting the actual phonetic production and perceptual realities of these languages. From a phonetic standpoint, mixed language phonology is a complex arrangement of the phonologies of the source languages. Analyses of Media Lengua (Stewart 2014, 2015a, 2015b, 2018a, 2018b), Gurindji Kriol (Buchan 2012, Jones & Meakins 2013, Jones, Meakins, & Buchan 2011, Jones, Meakins, & Muawiyath 2012, Stewart et al. 2018, 2020), and Michif (Rosen 2006, 2007, Rosen, Stewart, & Cox 2020) suggest there exists a propensity for phonological material to assimilate to the phonology of the ancestral language (e.g., Quichua for Media Lengua, Cree for Michif, and Gurindji for Gurindji Kriol). In other words, the language that was acquired originally as an L2 essentially conforms to the L1 phonological system in much the same way a mid- to late bilingual might acquire the phonology of their L2 (i.e., acquired after puberty). At the same time, the non-heritage language appears to feed in phonological aspects that appear beneficial for maintaining contrasts.

The arrangements of the source phonologies, however, do not always conform to traditional notions of adaptive dispersion models, which predict that when a new category is established, crowding of the phonetic space occurs, causing dispersion to maintain contrasts (Flege 2007, Johnson 2000, Liljencrants & Lindblom 1972, Lindblom 1986, 1990, Livijn 2000). Instead, there are near-mergers, overlapping categories, categorial assimilation, categorial maintenance, and overshoot of target categories at the segmental level, in addition to prosodic assimilation, possible preservations of archaic patterns, and innovation at the suprasegmental level. The following sections describe these processes for obstruents (6.1), vowels (6.2), and suprasegmentals (6.3).

6.1.   Obstruents

For Gurindji Kriol, with coexistent Gurindji voiceless stops /p, t, c, k/ and Kriol contrastive pairs /p-b, t-d, k-g/, Jones & Meakins (2013) examine whether voice onset time (VOT) values of Gurindji Kriol reflect those in

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[4] Van Gijn does not include the foot level in his analysis, though Muysken (2013b) does.

English cognates. Their results show that, regardless of the source-voicing category, stops in Gurindji Kriol are produced with short lag VOT. In contrast, Stewart et al. (2018) show that perception of voicing in Gurindji Kriol is currently developing, owing to increasing contact with mainstream English. Their results show listeners are able to perceive the voicing contrast between the labial stops [p-b], whereas the contrast between the alveolar and velar stops [t-d] and [k-g] is perceived only by an estimated 39 percent of the participants tested. The rest of the participants consistently perceived the voiceless alveolar and velar but not their voiced counterparts. Kriol listeners tested in the same experiment showed greater degrees of perception of the contrast but not to the extent that would make it significant in the phonology of the language.

A similar story can be told for fricatives in Gurindji Kriol. Butcher (2006) shows the majority of Australian languages, including Gurindji, lack phonemic fricatives. However, Sandefur (1979) shows the production of fricatives in Kriol is highly variable in comparison with their stop counterparts. Buchan (2012) specifically investigates the production contrasts between the voiceless fricatives [f, s] and the stops [p, t] with an analysis of maternal speech in Gurindji Kriol. While trends suggest variability across place and manner of articulation, the mother's production of word-initial fricatives became more prototypical when communicating with older children. According to a perceptual study of this same phonological conflict site by Stewart et al. (2020), perceptions of [f-p] (e.g., *fok* 'fork' & *pok* 'pork') and [s-t] (e.g., *sik* 'sick' & *tik* 'tick') were also quite variable, with little over half the participants showing a strong contrast between the pairs, while the other half either had consistent responses to the fricative stimuli but random responses to the stops. Yet others only showed consistent responses to the fricatives. Kriol listeners showed similar results.

Finally, for Media Lengua, with coexistent source stop systems similar to Gurindji Kriol, consisting of the voiceless /p, t, k/ stops from Quichua and contrastive /p-b, t-d, k-g/ stops from Spanish, Stewart (2014, 2018b) also explores the production and perception of stop voicing. Unlike Gurindji Kriol, Media Lengua has clearly adopted the Spanish voicing contrast in both production and perception, while older Quichua speakers have a tendency to weaken the voiced series during production and older Quichua listeners do not consistently identify the voiced series perceptually.

6.2. Vowels

Several recent studies provide intra- and/or inter-language comparisons between the vowel systems of mixed languages and those of their source languages. Gurindji Kriol has coexistent vowel systems consisting of /ɪ, ɐ, ʊ, ɛ, ɔ/ monophthongs from Gurindji and /ɪ, e, æ, ɔ, ʊ, ɐ/ monophthongs, including a length contrast in five of the positions (/iː, ɜː, oː, ʉː, ɐː/), from Kriol. Jones, Meakins, & Muawiyath (2012) demonstrated that there exists greater

formant (both F1 & F2) overlap in the mainstream Australian English-source front vowels /æ/ & /e/ and back vowels /ʉː/ & /oː/ in Gurindji Kriol compared to their English cognates in Kriol. This overlap may suggest that Gurindji Kriol is expanding its vowel inventory. Jones, Meakins, & Muawiyath (2012) also show that the duration differences between Gurindji Kriol vowels (e.g., /ɪ/ and /iː/) are also shorter compared to those in mainstream English.

For Media Lengua, with coexistent vowel systems consisting of /i, a ,u/ phonemes from Quichua and /i, e, a, o, u/ phonemes from Spanish, Stewart (2014, 2018b) observes that the system is partially overlapping though stratified. In this analysis, in both Quichua and Spanish, the high and low vowels /i, a, u/ coexist as near-mergers, while the Spanish mid-vowels /e, o/ overlap coIsiderably with the Quichua high vowels (/i, u/). Stewart (2014) also shows that the arrangement of Spanish vowels in words borrowed into Quichua is different. Here, the Quichua and Spanish high and low vowels /i, a, u/ underwent complete merger while the Quichua high vowels maintained a negligible contrast with the Spanish mid-vowels /i, e/. Unlike Gurindji Kriol and Michif, Media Lengua is often described as a mixed language with few stratified elements at the phonological level (Gómez Rendón 2005, Muysken 1997b). However, these results dispute such analyses, since Media Lengua appears to be operating two vowel systems based solely on the language of origin, albeit with very low functionality.

Michif has a Plains Cree vowel system consisting of the phonemes /i, e, a, o/ with a length contrast (/iː, eː, aː, oː/) in coexistence with the French phonemes /i, y, e, ø, ə, ɛ, œ, a, ɑ, ɔ, o, ʊ, u/ with four nasal ones: /ɛ̃, œ̃, ɑ̃, ɔ̃ /; and one long /ɛː/ phoneme. Rosen (2007) argues that it is unnecessary to focus on the source languages to accurately describe Michif's phonology as the language can be more succinctly described from a synchronic monolingual standpoint, which does not overcomplicate the system with sounds that do not reflect actual language use. Rosen, Stewart, & Cox (2020) also investigate phonological stratification with an acoustic analysis of F1 and F2 formants. Based on the oral series, they conclude that only two French vowels appear significantly different from their Cree counterparts (/ɛ, ɔ/).

6.3.　Suprasegmentals

Regarding suprasegmental phonology, Stewart (2015a) describes a variety of intonation patterns based on fundamental frequency (F0) contours in Media Lengua. He remarks that the overwhelming majority conform to Quichua prosody and those that did not were either innovations or preserved patterns no longer used in present-day Quichua of the region where Media Lengua is spoken. Furthermore, there were no patterns that appeared to match Spanish prosody that were not already shared with Quichua. For Michif, Rosen (2006: 186–7) concludes that its stress assignment is strikingly similar to that of Cree, except that Michif is quantity-sensitive at the word level, while Cree is quantity-insensitive at every level.

6.4. Discussion

The results from the acoustic studies presented above suggest that stratification at both the segmental and suprasegmental level is more complicated than a simple clear-cut division between source languages. Many of the different phonological arrangements found throughout these acoustic analyses are non-conventional in the sense that in order to maintain phonological contrasts, we would expect categorical dispersion. On the other hand, if contrasts are not important for phonological optimization, we would expect the complete loss of a sound, not overlapping systems or covert contrasts, which are perceptually contrastive only in one position but not in others, weaker degrees of categorial discrimination and identification than would be expected for fully contrastive phonemes, and variability in production and perception.

These findings suggest that when stratification is observed, it is most likely a by-product of different underlying processes, such as the age of acquisition of the L2 during the genesis of the mixed language, the level of proficiency in the non-heritage language, extent of exposure to the latter and extralinguistic influences (e.g., prestige), as well as the level of functional load required to maintain an optimum level of phonemic and prosodic contrast in the mixed language. Thus, many of the phonological arrangements reflect those in speakers who learned an L2 late in life (i.e., the foreign phonemes are not acquired to the same degree as those found in monolingual speech). This can also be seen in how mixed languages overwhelmingly conform to the phonological system of the L1 source language spoken by the community before the L2 language was present. The fact that some contrasts are adopted while others are not might also suggest that cognitive factors are at play, which benefit cognitive processes such as distributing functional load, levelling out phoneme frequency, and allowing for a greater number of contrasts, leading to greater phonological optimization. The unruly phonological systems of mixed languages should not come as a surprise since the phonological shells of entire linguistic systems and/or categories undergo transfer to a new system in an incredibly short period of time before becoming nativized, oftentimes within less than a single generation.

7. Concluding Remarks

The category of MIXED LANGUAGE is a mixed bag, to say the least. They have different lexical profiles, ranging from languages such as Media Lengua, which have absorbed extraordinary amounts of vocabulary from the non-heritage language, to others such as Angloromani, which selectively replace lexical items, from the heritage language, in what is otherwise a situation of language shift. Mixed languages also have different structural profiles. In some mixed languages such as Media Lengua and Angloromani, the structure is clearly derived from one language (the heritage language in the

former case but the non-heritage language in the latter), whereas in others such as Michif and Gurindji Kriol, the two languages contribute to the structure of the mix, which has enabled them to keep inflections from both languages. There are yet other mixed languages, such as Sri Lanka Malay, which are the outcomes of the restructuring of the grammar of one language on the model of another.

One ramification of mixed languages is the inapplicability of historical classification methods, viz., the comparative method or newer phylogenetic tools. Lexico-statistical methods do not reveal a straightforward genetic signal for mixed languages due to the often mixed nature of basic vocabulary. Similarly, morphological methods cannot be used because they are based on categories that are generally resistant to transfer, e.g. inflectional paradigms. In this respect, one of the definitions of a mixed language relies on a negative criterion, viz., their inability to be classified according to a single language family.

The mixed languages we have discussed also broadly share one genesis story, in that they have all emerged in situations of bilingualism where a common language was already present. In this respect, they did not develop to serve a communicative function, but rather as a marker of an in-group identity. This identity was either a new identity created through mixed marriages or groups (Michif, Sri Lanka Malay) or the maintenance of an old identity that is under threat (Angloromani, Gurindji Kriol, Media Lengua). To add to the lack of cohesion in this class of contact languages, it seems that there is no single socio-historical cradle that can predict the resultant typological profile of mixed languages. For example, Michif and Gurindji Kriol are both structural mixes, which split along the NP and VP, but Michif has resulted from mixed marriages and Gurindji Kriol from language shift in a single cultural group undergoing colonization.

Finally, mixed languages provide an opportunity to study the extremes of language contact and change, e.g., implicational hierarchies in studies of borrowing and predictive theories of code-switching. Although it was originally thought that mixed languages were the result of special processes (e.g. Bakker's theory of intertwining), it seems more likely that they are simply the extraordinary result of ordinary processes (Thomason 1995). The structure of most mixed languages can be attributed to earlier codeswitching practices, and their phonology is the result of well-documented L2 learning processes.

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