Mix-Im-Up Speech and Emergent Mixed Languages in Indigenous Australia

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The numbers of speakers of Australian Indigenous languages are plunging, but some languages are changing radically. Two such languages are examined here: Tiwi and Gurindji. Tiwi in its traditional form is highly head-marking and polysynthetic. Modern Tiwi has retained some of the old verb morphology but adopted English nominal grammar. Traditional Gurindji is a language of dependent-marking type. Young people have adopted verbal grammar from the local English-based creole, but retained Gurindji case-marking on nominals, the obverse of the situation with Tiwi. The origins of this new mixed language can be traced to the code-switching speech of the previous generation.

1. Language Shift and Language Change

Australian indigenous languages are all endangered. Over half of the original 250 languages are gone, and many of the remainder are spoken only by old people. The prognosis for the survival of the remaining languages is poor, even perhaps for the stronger languages of Arnhem Land and Central Australia, which are currently spoken by all age groups. We should not, however, be fatalistic about the impending loss of these languages: many indigenous groups are fighting to shore up their languages, or even bring them back from oblivion, and some signs of success in these endeavors are beginning to emerge (McConvell and Thieberger, 2001; McConvell, 2001; Amery, 2000).

As we attempt to monitor and assess the states of health of languages in Australia, however, certain aspects of the problem tend to elude us because of the conceptual systems and tools we use. First, surveys tend to measure the numbers of speakers of single languages, and derive trends from those numbers, rather than examine the viability of a linguistic ecology or system of bilingualism (McConvell, 1991). Secondly--and this is the problem of focus in this paper--some languages are changing quickly and in a radical fashion. Within the categories used to examine language endangerment, these cases of change are not easily encompassed. The younger generation of speakers of such languages may not be shifting to speaking English, or a known indigenous language of another group, as is assumed to be the "normal" case in Australia. But something is happening that points to disruption in transmission patterns, and the emergence of a radically new variety can, in turn, cause disquiet, even alarm, among the speakers of the language.

While the emerging new language may be considered to be "the same" language as the one spoken by the older generation, or a variety of it, the pair of varieties may in fact fail the "objective" tests for languagehood usually used, such as mutual intelligibility. Modern and Traditional Tiwi, to be discussed below, spoken by adjacent generations of the same group, are said to be scarcely mutually intelligible. Their grammatical systems are radically different and their lexica also diverge.

The problem raised by such rapid and radical change has sometimes been elided by placing such phenomena within a "language death" analytical framework. Radical changes in languages are attributed to the endpoint ("death") towards which the languages are heading. While not wishing to deny the excellent work done within this framework, I would argue that it is fatally flawed theoretically because of the teleological use of a predicted endpoint as the guiding principle of analysis. There is no denying that some languages that undergo radical change also eventually die out, but not all do: Tiwi, for instance, in some form, is still actively spoken by all generations today and does not appear to be on the verge of dying out.

The problems with the notion of "language death" phenomena are in no way mitigated even if we are studying a language in which the historical sequence has played out to an end in which the language is no longer spoken. At any point in the sequence, it is not the supposed "end of the road" that causes the current change. Looking at the situation in these terms gets in the way of analyzing the real reasons for change, i.e. the forces currently active at any point in time. Having said this, I concede that there could well be negative feedback loops in the process of radical change that make further intergenerational transmission more difficult. These processes are yet to be discovered, however, not to be assumed to be part of a so-called "language death" process.

In this paper I look at some cases of radical change in Aboriginal languages in Australia. One case with which I am familiar is that of the Gurindji, a group with whom I have worked for many years. In this case, because I have worked on both adult code-switching behavior (McConvell, 1988; 1994) and (with Gurindji co-researchers) children's language (1995), I am fairly confident that there is a direct connection between the two. Patterns of adult code-switching have been largely regularized in certain ways in the young people's speech, which I think we are justified in characterizing as a *mixed language*. In Tiwi (Lee, 1987), a similar picture probably explains recent radical change, although the history of the transition has not been documented. In other Northern languages structurally similar to Tiwi, code-switching patterns similar to Modern Tiwi possibly point to the emergence of radically changed languages that might be regarded as mixed. While the extent of this phenomenon is not known, it does not seem as rare as is asserted by many publications.

It turns out that Tiwi and Gurindji represent two quite different paradigms of the emergence of mixed language from mixed input, which can be related primarily to the typology of the old language in each case. These typological differences are described in the next section as background to the analysis that follows. Finally I add some remarks on the potential use of such analysis, as in language planning by communities and schools.

2. Suffixing and Prefixing Languages in Australia

In Australia there are two major linguo-genetic categories of language: those of the Northern, or Non-Pama-Nyungan, families, and those of the Pama-Nyungan family. Overwhelmingly the Non-Pama-Nyungan languages are head-marking with complex verb morphology, often polysynthetic, including pronominal prefixes on the verb and sometimes no nuclear case-marking on noun phrases. In contrast, the Pama-Nyungan languages are dependent-marking with nuclear case marked on noun phrases (usually with split-ergative case systems) and usually no pronominal agreement on the verb. Both these sets of languages have been in intensive contact with English and English-based pidgins/creoles for between 70 and 200 years, depending upon the region. Language shift to English-based varieties has occurred in most areas, but during this process some mixed languages have arisen, based on pervasive code-switching. I present data from Modern Tiwi (Lee, 1987), a variety of Tiwi (a NPN polysynthetic language) in which radical change has occurred in the last two generations; and from Gurindji Children's Language (Dalton, McConvell et al., 1994), a mixed language formed from Kriol (an English-based creole) and Gurindji, a PN language. Code-switching among older Gurindji is pervasive and expresses social meaning about identity, from which other inferences can be drawn about the force of utterances (McConvell, 1988; cf. Myers-Scotten 1993a), or it may be used to frame segments of narrative with a "'voice of authority" (McConvell, 1994). The Tiwi situation has a similar background, but earlier language use that led to the current outcomes has not been studied in detail.

A marked difference is found between the new varieties of these languages: Modern Tiwi has maintained the Tiwi verbal system with simplification but adopted much English nominal grammar; Gurindji Children's Language, on the other hand, has almost entirely adopted the Kriol verbal system, but retained nominal case marking from the old Gurindji language. The parallels with Michif and Mednjy Aleut, two mixed languages of North America, are striking, and lead us to consider hypotheses about how the structural properties of the language pairs involved in contact interact to generate outcomes that are, to a great extent, predictable.

3. Code-switching and Language Change

Carol Myers-Scotton's suggestions for the study of contact-induced change (1993b) specify that code-switching practices lead to many instances of change, grounding the results of contact strongly in the theory of structural constraints within code-switching. One limita-

tion is that the theory is too rigid in some respects to accommodate certain types of change in mixed languages that involve grammatical dominance of one language in a bilingual situation (in code-switching and a resulting mixed language), in one domain (nominal or verbal), rather than throughout the grammar. I argue that this phenomenon of "split" operation of MLF is widespread and could be accommodated by some adaptation of the theory. In this paper I take an example I have studied in Australia today where what might be described as a mixed language has arisen from a situation of pervasive code-switching between two languages among adults of the previous generation. With some modifications, the MLF model can handle the main facts of this variety, where nominal morphology has been retained in the old language, while verbal morphology has entirely been replaced by that of the new language. I show here that the modifications proposed are also required to handle other mixed languages of this type outside Australia, and mixed languages of the opposite type (with verbal morphology retained in the old language) in both Australia and North America.

The MLF model (Myers-Scotton, 1993) was developed to take account of the failure of earlier constraints, while retaining elements of them that seemed to be valid within a more integrated and motivated framework. A key concept in the MLF model, along with other approaches to code-switching, is the distinction between the Matrix language (ML) and the Embedded language (EL) in code-switching speech (Myers-Scotton, 1993b:68):

> One of the languages involved in code-switching plays the dominant role. This language is labeled the matrix language (ML) and its grammar sets the frame for two of the three types of constituent contained in sentences showing intrasentential code-switching: ML+EL constituents and ML islands.

The Matrix Language hypothesis is realized as two testable principles: the Morpheme Order Principle (morpheme order must not violate ML morpheme order), and the System Morpheme principle (all syntactically relevant system morphemes must come from the ML).

Much of the literature on language change, even that which takes account of language contact (e.g. Thomason and Kauffman, 1988), pays little attention to the patterns of code-switching and the effect

these have in language change outcomes. Myers-Scotton has begun to propose scenarios of language change based on types of code-switching involved in contact, which in turn arise from both the social character of the contact between the groups and the linguistic differences between the language pairs. The scenarios proposed are (Myers-Scotten 1993b: 227-8):

Diachronic Outcome Scenarios

Scenario I: Content Morphemes as Core lexical B forms.
Scenario II: Relexification with EL content morphemes.
Scenario III: Initial ML Role in code-switching for an L2
               in Intergroup communication.
Scenario IV: The turnover of the ML in code-switching.
Scenario V: Language shift.
Scenario VI: Language death.
Scenario VII: The development of pidgins and creoles.

Myers-Scotton (1993b:216-217; 220-222) assigns cases that are reputed to be "mixed languages" in the literature to different scenarios. The Media Lengua case in which the grammar is Quechua and the content lexicon is 90% Spanish belongs to Scenario II; Myers-Scotton seems to imply that such cases are in fact "unmarked" code-switching. If however, the pattern has been "frozen" during the process of language transmission to a new generation, then it is surely not appropriate to term it code-switching any longer.

The Ma'a case, where the grammar is predominantly Bantu and the content lexicon Cushitic, belongs to Scenario IV, according to Myers-Scotton. The difference from the Media Lengua case has to do with the fact that the ancestral Ma'a undoubtedly spoke a Cushitic tongue (change in grammar-source), whereas the Peruvians originally spoke Quechua (maintenance of grammar-source). Media Lengua (Muysken, 1988) exemplifies a case where the different source languages correspond very clearly to a distinction like that between content and system morphemes.

It is the case, and the mixed language Michif, which Bakker (1992) studied, is a prime example, that mixed languages do not always neatly follow these predictions but distribute the source lan-

4. Michif

Michif is the language of the Metis, a socially distinct mixed-race group in Canada. It is a mixed language drawn from French and Cree. Early reports indicate that it may have arisen via a stage of intrasentential code-switching. Bakker (1992) also reports on code-switching between other Algonquian languages, French, and English, and the patterns of contemporary Montagnais-French code-switching are quite similar to the outcome in Michif, with a preponderance of French nouns entering the language, although in contrast to Michif, French verbs are also incorporated to some extent through a "helping verb" construction (Drapeau, 1991).

In Michif, virtually all verbs, question words, personal pronouns, and demonstratives are from Cree. Numerals and virtually all nouns, with their appropriate French articles or possessives, are from French, including gender distinctions. Prepositions and negative elements are more than 70% from French, and adverbs are more than 70% from Cree. Cree nominal morphology is almost non-existent, whereas Cree verbal morphology is extensive (Bakker, 1992:236). The verb morphology of Michif is entirely Cree, with the exception of some noun incorporation of French nouns and a very few French verb stems inflected in Cree fashion. The few affixes that do occur on Cree nouns (e.g. obviative) also occur on French noun phrases (which include French determiners and adjectives in the correct French position).

(1) Michif (CAPS = French) (Bakker, 1994: 30)

PAR LA QUEUE   apoci-pit-ew,   kihtwam   LE LOUP
by the tail   inside-out-pull-he/him   again   the wolf
'He pulled him inside out by the tail, and the wolf

ase-kiwe-pahta-w
back-go-home-run-he
ran home again'

If one used Myers-Scotton's scenarios here, Michif could be characterized as a frozen form of code-switching where the stabilization occurred *before* turnover to the new language as ML. Cree dominates the basic grammar through the verb morphology. Penetration of French verb stems into this structure is quite rare because of incompatibility between them and Cree affixes. Perhaps verb stems in languages such as Cree partake more of the nature of system morphemes than (approximate) equivalents in such languages as French, where they are clearly content morphemes. Interestingly, in the "mixed" form of the related Canadian language Montagnais mentioned above (Drapeau, 1991), insertion of French stems is much more common because of the widespread use of a "helping verb" construction, which allows the French infinitive to be inserted separately from the Cree verb morphology.

(2) Montagnais (CAPS = French)

ENGAGER   nitu-ta-ku-ti
 hire   they-did-me
'They hired me'

What remains to be explained in Michif is the dominance not only of French lexicon but also of French grammar in the nominal morphology, including the use of French prepositional phrases. These could be regarded as EL islands in Myers-Scotton's terminology, but this does not appear to provide any motivation for why what appears to be a quite specific area of grammar should be realized in the new language.

5. Modern Tiwi

In Australia, Modern Tiwi is a well-known example of radical linguistic change between generations. So great is the change that the older and younger people have difficulty understanding each other, although they believe they are speaking the same language. While Traditional Tiwi is polysynthetic in type with very complex verb morphology, the middle-aged generation (speakers of Modern Tiwi, the variety to be examined here) has somewhat simplified the verb morphology. The young people's Tiwi of the next generation (Ultra-modern or 'New') has moved further in an analytical direction, and towards English, but this variety will not be considered here (Lee, 1987):

(3) Verbs (TT=traditional; MT=modern)
    a.   TT
              ngi-mini-pirni
              he-me-hit
              'He hit me'
    b.   MT
              kilim yi-mi yiya
              hit he-did me
              'He hit me'
    c.   TT
              yi-pirni
              he/she/him-PST-hit
              'She hit him'
    d.   MT
              kilim ji-mi arra
              hit she-did him
              'She hit him'

(4) Prepositional Phrases
    a.   TT
              ngu-mpu-nginji-kuruwala
              I-NPST-you-DAT-sing
              'I will sing for you'
    b.   MT
               yi-kirimi jurra fu ngawa
              he-PST-make church for us
              'He made a church for us'
    c.   TT
               a-wuni-marri-kiji-ja manjanga
              he-NPST-LOC-COMIT-stick-go
              'He came with a stick'
    d.   MT
               wokapat a-mpi-jiki-mi with layt
              walk she-NPST-DUR-do with light
              'She is walking with a light'

Modern Tiwi retains marking of subject pronouns by means of verb prefixes and aspect marking on the verb. While some verb morphology is retained from the old language, English grammar takes over in the prepositional phrases, for example, *with layt* (with a light);

fu ngawa (for us). The complexity of Tiwi verbal morphology has suffered a drastic reduction: nearly all incorporated forms have been lost and pronominal objects, previously expressed in the verb, now appear as free forms, as in (4b).

Traditional Tiwi had a number of free form verb stems that required a "helping verb" to go with them. This construction has now swept the board, pushing out most of the non-compound verb forms and providing a welcoming environment for much borrowing of verb stems from English and Pidgin (as in the case of *wokapat*, "walk" above).

From what Lee tells us about the history of the period, use of Pidgin English mixed with Tiwi as an interlanguage by mission staff was quite influential, and pervasive code-switching between Tiwi and forms of English was and is common on the islands.

As with the case of Michif and Montagnais, data on contemporary code-switching in related or typologically similar languages can give clues to possible scenarios leading to the Tiwi situation. The most apposite examples come from Non-Pama-Nyungan "prefixing" languages with complex verb morphology of polysynthetic type. From the limited data so far available (Leeding, 1993), the pattern of code-switching used by young people, which is already tending towards a standardized style of "unmarked code-switching" in other Non-Pama-Nyungan languages, shows a strong tendency to retain verb morphology from the Aboriginal language, while adopting vocabulary and nominal related features from English or Kriol.

(5) Burarra (CAPS = English or Kriol)
    a. Ngaypa ENOUGH MONEY ngu-rrima-nga TO BUY-IM balaja
       I   I-have-NPST buy   food
       'I have enough money to buy food'
    b. Ngaypa WAIT ngu-nirra nula MY HUSBAND
       I   I- be-for-him
       'I waited for my husband'

The pattern for polysynthetic languages both in North Australia and North America seems to be for code-switching to retain the old language as a matrix, including old language verb forms, and for a similar pattern to emerge when contact leads to a new mixed type of language.

6. Gurindji Adult Code-switching

Gurindji is an Australian Aboriginal language spoken in varying degrees of proficiency by about 600 people in the Victoria River District, Northern Territory. The traditional situation was one of widespread multilingualism with no predominating lingua francas. European settlers arrived in the area in the late nineteenth century and began savage attacks on the local population, eventually forcing those who survived to attach themselves to cattle stations and work there for no wages under harsh conditions. The settlers and the Aboriginal people they brought with them, mainly from eastern parts of the Northern Territory and Queensland, introduced a Pidgin English lingua franca. This continued as a widely known second or third language in the region until about the mid 1950s when it began to creolize: children grew up with the new creolized pidgin (known by linguists as Kriol) as their first language, and usually learned Gurindji partially and mostly later in life.

The predominant mode of communication among adults when I first started working among Gurindji people in the 1970s was pervasive code-switching, mainly between Gurindji and Kriol, with standard English and some other Aboriginal languages occasionally interspersed. In adult code-switching, the question of the ML has not been settled definitively. Both Gurindji and Kriol are found as ML's and the choice of ML often has social meaning. I interpreted the language choice in terms of a nested configuration of social arenas (McConvell, 1988:131). Interpreting some of the discourse functions of switching in terms of social identity is problematic, although not impossible (McConvell, 1994).

The example below (6) is typical of "expressive" switching, where the "business end" of the butchering and distribution of meat that participants are directing is in Kriol, but the backchannelling of jokes related to kinship ties is in Gurindji.

(6) Gurindji Adult Code-switching (CAPS = English or Kriol)
   G: I'LL TAKE-IM BOTTOM AND GO BACK/
       'I'll take the bottom and go back/
       ngalking-ku kungulu-yawung
       greedy-DAT blood-HAVING
       bloody meat is for greedy people'

J: I'LL HAVE-IM/ kungulu-yawung; nyuntu marntaj
       blood-HAVING you all right
       'I'll have/ the bloody meat; you are OK (to go)' [joking]

However, there is a tendency for Kriol to take the role of ML, predominantly in the verbal domain. In (7) (McConvell, 1988:134) and (8) (McConvell, 1994) the verb, pronouns, and some modifiers are in Kriol, but a noun phrase object and adverbial phrases are in Gurindji. In (9) (1988:137), the verb and the nominal lexicon are in Kriol, but a nominal case suffix is retained in Gurindji. Note that this is quite the opposite of the pattern in Tiwi and other Non-Pama-Nyungan languages, where there is a strong tendency for the old language to occupy the verbal domain and English or Kriol the nominal /prepositional.

(7) Gurindji Adult Code-switching
   karla-rni-yin/ TOO SKIN-IM/ parntara-rni
   west-UP-FROM   whole-ONLY
   'Skin the whole lot from the upper west too'

(8) Gurindji Adult Code-switching
   Ngumpin-kari/ ALL RIGHT THEY BEEN GET-IM ALL ABOUT/
   Person-OTHER
   'Admittedly they did get other people [with sorcery] because of

   wankaj-ja jaru-ngka
   bad-LOC word-LOC
   bad rumors'

(9) Gurindji Adult Code-switching
   FOWL/ -u/ THEY WANT-IM NECK BEEF *DAT*
   'They want neck beef for the chickens'

7. Gurindji Children's Language

In 1988 I did a brief study of Gurindji children's language with Gurindji students at Batchelor College (Dalton et al., 1995). This study revealed that the language generally spoken by the 5-8 year olds of Gurindji parentage could not be described properly as either Gurindji or Kriol, as it had features of both. I examined Gurindji/ Kriol

code-switching among adults competent in both languages (McConvell, 1988), and while this Children's language bears some resemblance to this code-switching speech, it is not really code-switching any more.

The adults switch between chunks of speech in Gurindji and chunks of speech in Kriol, mainly choosing codes to express social meanings by identifying themselves with the social categories associated with each language (McConvell, 1985; 1988; 1994). I call this style of speech Gurindji Adult Code-switching, and it is briefly described above. The children did not appear to use switching to express social meanings to any extent detectable in the study, however.

The adults control the full grammar of each language and use that within the chunks encoded in that language. They sometimes use a basically Kriol grammar with Gurindji elements inserted, and sometimes a basically Gurindji grammar with Kriol lexical items inserted. The children do not do this. Rather, they use a stabilized kind of language made up of elements from both languages in a systematic way. Gurindji children's language, therefore, looks like a new language--a mixed language. It is not certain whether this mixed language will become the language of the community or will disappear (probably in favor of a form of Kriol or English).

Gurindji children's language (GCL) lexicon is drawn from both languages. Its way of expressing tense and aspect is drawn from Kriol, and the Gurindji verb suffixes and auxiliaries used for these functions are not used by GCL speakers. Also entirely missing is the Gurindji pronominal clitic marking usually present on auxiliaries; in traditional Gurindji this is often used instead of free pronouns, and also to mark number of subject and objects, since this is usually not marked on the noun phrase itself. However, while the free pronoun system of Kriol is adopted, most of the time the traditional Gurindji free pronoun forms are used more by children than by adults, as are Gurindji demonstratives in preference to Kriol ones.

One of the striking aspects of GCL is the use of Gurindji case suffixes on nouns and pronouns, including ergative marking for transitive subjects. A change that has been made by the present generation is the extension of ergative marking to transitive subject pronouns as well as

nouns, e.g. *ngayu-ngku* I-ERG in (10a) below. Older people cite this particularly as an example of "wrong" speaking of Gurindji by children. Previously, Gurindji pronouns had no case marking for either subject or direct object [an example of a type of split ergativity, which Anderson (1985: 183) says is unattested], as in the Traditional Gurindji (TG) equivalent (10b) below. The pronoun *ngayu* (I) in brackets is optional, as independent pronouns are not necessary because of bound pronouns like *rna*, which children no longer use.

(10)   Ergative Marking
    a.   GCL
        ngayu-ngku bin kej-im karnti
        I-ERG PST get-TR stick
        'I got a stick'
    b.   TG
        (ngayu) ngu=rna karnti warrkuj ma-ni
        (I) AUX=I stick get get-PST
        'I got a stick'

Example (10a) also shows that GCL uses Kriol auxiliaries like *bin* for marking tense-aspect. As can be seen from the TG equivalent of "get" in (10) above, most TG verbs are compounds consisting of a coverb, for example, *warrkuj* "get," with an ancillary verb, in this case *ma*—"get." For intransitive verbs, common Gurindji preverbs are used by children as verbs in GCL, for example, *kutij* "stand up" as in (11), *makin* "sleep," and *lungkarra* "cry." The traditional forms with Gurindji ancillary verbs are not used by children. For transitive verbs, the choice is mainly Kriol/ English verbs with the transitive suffix *-im*, as in (12); this asymmetry can be explained in terms of the blocking hypothesis of the MLF model.

(11) Intransitive Verbs
    a.   GCL
        Nangala bin kutij
        [subsection]PAST stand
        'Nangala stood up'
    b.   TG
        Nangala kutij karri-nya
        [subsection]   stand be PAST
        'Nangala stood up'

(12) Transitive Verbs
    a.   GCL
        Nangala-ngku/ put-im/ ngawa-ngka
        [subsection]-ERG   water-LOC
        'Nangala is putting it in the water'
    b.   TG
        Nangala-lu yuwa-nana ngawa-ngka
        [subsection]-ERG put-PRES water-LOC
        'Nangala is putting it in the water'

As in Gurindji and Kriol, there is no copula ("be") in identifying sentences in GCL. Predicates can be possessives, indicated by the dative form of nouns or pronouns:

(13) Copula
    a.   GCL
        nyila Sisi-wu wayi?
        that [name]-DAT question
        'That belongs to Sisi, doesn't it?'
    b.   TG
        nyila ngu-rla Sisi-wu wayi?
        that AUX-for her [name]-DAT question
        'That belongs to Sisi, doesn't it?'

8. Nominal/verbal Asymmetry in Mixed Languages

A theory like Myers-Scotton's would like to predict which language an item is drawn from on the basis of the content/system morpheme dichotomy. All such theories run into problems because of mixed languages like GCL, in which bound and free system morphemes in noun phrases, such as case suffixes, pronouns, and demonstratives, are drawn from Gurindji, and bound and free system morphemes in verb phrases are drawn from Kriol. No one principle works across the board for all domains of grammar.

If GCL were an isolated case in this regard, one might be inclined to shrug one's shoulders. It is not an isolated case, however. There are at least three other documented cases where the content/system approach, or variations of it, fail. This is not a case of a random scatter of codes in the system morphology, however. The other three cases, precisely like Gurindji, allocate source languages for system morphemes

differentially between the nominal and verbal domains. Nominal morphology comes from one language; verbal morphology from the other.

We have already discussed the mixed language Michif (Bakker, 1992) in which the old language Cree monopolizes the verb, and pointed to the striking parallel with Modern Tiwi in Australia. Turning to the opposite trend in Gurindji code-switching and children's language, where the verbal elements have been taken over by the new language but nominal grammar remains in the old language, there is a partial parallel in the mixed language Medniy, or Copper Island Aleut (CIA), spoken on an island in the Bering Sea. Golovko (1994: 114) describes CIA as follows:

> The majority of the vocabulary (nouns and verb stems), demonstratives, postpositions, question words, some clitic words, nominal and verbal derivation, nominal inflection markers, and some dependent verbal modes come from Aleut. CIA verb stems have Russian tense, number and person markers. The subjunctive marker, negator, subjective pronouns, the infinitive, conjunctions and clause markers are of Russian origin . . . Syntax is partly Russian, partly Aleut, Russian features prevailing.

Some other relevant aspects of CIA are a-e below, according to Sekerina (1992):

    (a)   Aleut personal possessive suffixes are used on nouns, but Russian equivalents are occasionally used [this statement of Sekerina is compatible with Golovko's statement that nominal morphology is generally Aleut, e.g. (14) from Golovko (1994: 115)].

(14) Copper Island Aleut (CAPS=Russian)
      BOOCHKI-x' NI-umnaa-L POETOMU
      Barrel-ABS NEG-tight-PAST so
      'The barrel had a hole in it so

      taanga-gan huzu-u hyuu-L
      water-REL all-POSS drip-PAST
      all the water leaked out.'

(b) Russian-derived pronouns are used as subjects, and Aleut derived pronouns are used as direct objects; oblique objects are expressed by either Russian or Aleut forms [examples given in both sources use Russian subjective and objective pronouns, as in (15)].

(15) Copper Island Aleut (CAPS=Russian)
YA IVO kataa-L, a ON icaa-L
I itOBJ touch-PAST and it fall-PAST
'I touched it, and it fell.'

(c) Demonstratives come from either Russian or Aleut.

(d) Aleut verb stems are used, while Russian verb morphology has been substituted for Aleut, but in a non-Russian agglutinative fashion. The present tense suffixes are direct from Russian, but the past tense is formed from the Russian past tense suffix *-l* as the examples above, followed by personal pronoun suffixes.

(e) Both Aleut postpositions and Russian prepositions are used.

This picture has some important parallels with GCL: a number of the statements above would make sense if "Gurindji" were substituted for "Aleut" and "Kriol" for "Russian." In particular the use of the colonial-derived language to build the verb morphology and syntax while retaining the old language nominal (and specifically ergative) case-marking is striking

The two cases of CIA and Michif contrast in their linguistic outcomes. In Michif (as in Tiwi), it is the indigenous language that provides the verb morphology and most of the syntax, whereas in CIA (as in GCL), it is the colonial language that provides almost all of the verbal morphology and a number of syntactic principles, while most of the lexicon and the nominal morphology remain Aleut. Given that the social situation of the two groups at the time of the language mixture appears so similar, it is attractive to seek a linguistic explanation for these differences.

A better predictive model than that of Myers-Scotton may be one

in which the locus of the initial ML turnover in the grammar is selected by a typological feature of the old language. For the present I shall utilize the distinction made by Nichols (1986) between head-marking and dependent-marking languages. Polysynthetic North American languages with no nominal case marking, like Cree, are typical head-marking languages, as are most Non-Pama-Nyungan languages in Australia. Pama-Nyungan languages in Australia, on the other hand, with case marking on nominals and no pronominal marking on the verb, are towards the dependent marking end of the spectrum.

Different languages have different "centers of gravity" for their grammatical systems. For head-marking verb-coding languages, the center of gravity is the verb; for dependent-marking noun-coding languages, the center of gravity is in the nominal arguments. When a turnover of ML (as Myers-Scotton calls it) is in progress, the center of gravity resists the substitution of the new language for a longer period. The corollary of this is the following:

(16) Hypothesis about 'split' ML turnover
(a) head-marking verb-coding languages retain verbal grammar from the old language after nominal grammar has turned over to the new language; this situation, when frozen between the two stages, gives a Tiwi/Michif-type mixed language;
(b) dependent-marking noun-coding languages retain nominal grammar from the old language after verbal grammar has turned over to the new language; this situation, when frozen between the two stages, gives a GCL/ CIA-type language.

These hypotheses roughly fit the situations of the languages discussed here: Cree and Tiwi are head-marking verb-coding languages and have yielded the mixed languages Michif and Modern Tiwi, respectively, with the appropriate split. Gurindji is a dependent-marking noun-coding language and has yielded the appropriate split in GCL. CIA is more problematic: although it clearly falls in the same outcome category as GCL, its old language, Aleut, is less clearly fully dependent marking.

9. Conclusions and a Hopeful Postscript

This paper has provided at least one documented example (Gurindji children's language) of a transition between adult code-

switching and children's mixed language, as called for by Muysken (2000), with pointers toward several others that may fall into that category. Contrary to other approaches that work with a "no constraints assumption" (Thomason, 2001: 131), this paper has also reinforced the value of basing analysis of such processes in constraints-based theories, such as that of Myers-Scotton, although in detail it has been proposed that Myers-Scotton's approach requires some modification to deal with the data on mixed languages emerging from code-switching.

The rapid nature of the change in some endangered languages can be alarming, for the speakers themselves, as well as for linguists, even if we do not jump to the conclusion that this is just a symptom of "language death." The lack of stabilization of forms in some of these new languages does make the task of even describing the situation, let alone standardizing the language enough for use in programs, rather like first jumping on, then trying to halt, a runaway train.

To the extent that the outcomes are universally predictable from facts about the language pairs in contact, as claimed here, we have at least some beginnings of understanding of what might occur in these puzzling situations. If the processes in Tiwi and similar languages in Northern Australia are indeed similar to those in Michif, a Canadian language formed from the intertwining of Cree and French, then we know that the process can halt and stabilize at a certain point, as Michif did.

This might give an alternative perspective to the Tiwi and similar language communities that have been plagued by rifts between "purists" committed to maintaining the traditional form of the language and those more willing to accommodate change, for instance in education. Of course, the social situation is entirely different in the two cases, since Michif is the identity language of an officially recognized, distinct group of people, the mixed-race Metis, without parallel in Australia, and this may relate to the stabilization of Michif. For Cree who have lost their language or have become semi-speakers, relearning some form of the old language seems to be not only a possibility, but one which is increasingly being taken up. Recognition of radically changed and mixed languages as vehicles of communication and for use in certain stages of education, perhaps as a stepping stone prior to the relearning of a traditional language, may be a possibility for groups in this type of situation.

After SALSA 2001, I returned for a field trip to Gurindji country. There I was able to observe and record a little of the natural conversational speech of the cohort of children, now in their late teens, whom I had recorded with Gurindji co-researchers in 1988. They were still producing the typical combination of Kriol/ Aboriginal English with Gurindji case-markers, pronouns and lexical items found in GCL in 1988 [See (17), in which *ngantipa* is the first person plural exclusive pronoun, and (18), in which *-ma* is a Gurindji topic marker and *-jirri* the allative case marker].

(17) GCL
Thei neva bin givit *ngantipa*
they NEG PAST give us
'They didn't give it to us'

(18) GCL
Tudei-*ma* thei gon Darwin-*jirri*
Today-TOP they go Darwin-ALL
'Today they are going to Darwin'

The same 17-year-old girl who said these sentences, however, was able to carry on 'dual-lingual' conversations with older relations, with them speaking rapid and complex Gurindji and her speaking the above kind of '"mix-im-up" speech. This showed a high level of passive competence in Gurindji. Not only that, but she occasionally produced full Gurindji sentences as part of conversations with older people, such as:

(19) TG
COLD-DRINK ngu=yi-lu ka-nya ngayi-ny tanku
　　　　CAT=me-they take-PAST me-DAT meal
'They took my cold drink and meal from me'

This shows core features of traditional Gurindji grammar recorded as absent in Gurindji children's language by Dalton, et al. (1995), such as the Catalyst auxiliary *ngu* and the clitic pronouns attached to it, and a Gurindji finite verb with its correct tense suffix (*kanya*). The word order is also Gurindji, and the sentence is generally faultless as traditional Gurindji grammatically and phonetically.

Further research is needed to establish just how widely distributed this pattern is in this age-group, and how it has developed. Did these young people develop their competence in Gurindji at a later age than one would normally expect, for instance? Does it result from a "grand-mother factor" or other attribute of their family situation? Did they learn by using "'mix-im-up" language as a stepping-stone? What their language use does tell us immediately, though, is that superficial observation of "mixed" speech is not a guide to the real proficiency of speakers in any language, and especially not necessarily a fatal sign of impending language death. While Gurindji remains seriously endangered, the pattern here shows that language maintenance is perfectly possible in this type of situation, if the right conditions are put in place.

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