CONTACT-INDUCED CHANGE AND THE OPENNESS OF ‘CLOSED’ MORPHOLOGICAL SYSTEMS: SOME CASES FROM NATIVE AMERICA

Anthony P. Grant
Edge Hill University, Ormskirk, Lancashire, UK

1. Introduction

Linguists who try to classify languages firstly into families and then into their constituent subgroups (thereby practising genetic classification or, as Malcolm Ross’s happier phrase has it, genealogical classification) operate with a certain number of assumptions. Some of these have to do with the role of borrowing or, as it has increasingly (and more felicitously) been called since the publication of Thomason & Kaufman (1988), contact-induced (language) change (CIC or CILOCAL).

There are some areas in which the operation of CILC is assumed to have fairly free rein in very many languages, such as the absorption of large quantities of culturally-salient vocabulary reflecting the mores and mechanisms of speakers of a prestige language. We have come a long way from the pre-Sir William Jones days of the 1700s, when similarities between languages were often thought to be evidence of borrowing (when in truth they were genealogically based), while actual borrowings—to say nothing of typological similarities grosso modo—were often erroneously taken to show some kind of non-existent genealogical linguistic relationship.

But there are some areas where it is generally (if incorrectly) assumed that borrowing cannot and has not taken place. One of these is the realm of inflectional morphology, and the stricture is felt to apply especially strongly if such morphology is bound rather than free, or if it constitutes components of a paradigm. An exception to the claim that such morphology cannot be borrowed is made by some linguists in the case of the handful of ‘mixed languages’ which seem to have different origins for their morphology and for their basic lexicon. Four of these are quite well-

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known: Mednyj (or Copper Island) Aleut, Michif, Ma’a and Media Lengua (all ably discussed in the contributions in Bakker & Mous 1994 and Thomason ed. 1997) apportion the distribution of their components in different ways within their respective structures (see Appendix 1). This disparity of distribution is evidence (if not proof) that not all mixed languages arise in the same way, nor do they combine their disparate components according to a single template (though much can be gained in understanding the working of stable mixed languages by an examination of what is obligatory and what are optional elements in the structure of their various verbal morphological systems). But taken together these languages could be said to constitute an anti-model against what is supposed to happen when languages undergo change, especially contact-induced change. The unusual nature of the synthesis of the different combinations of elements and patterns of various kinds in certain other mixed languages, such as Wutunhua (Lee-Smith & Wurm 1996; Janhunen, Peltomaa, Sandman & Dongzhou 2008), Tasawaq (Wolff & Alidou 2001), Berbice Dutch (Kouwenberg 1994) and Mindanao Chabacano (Frake 1971), is generally less well-known to general linguists. But a study of the materials on all these languages demonstrates that the various ‘mixed languages’, even the four best-known ones, do not all select and combine different kinds of elements from their components in the same way and according to the same principles, as Appendix 1 illustrates. Examining primary divisions between the sources of nominal and verbal materials or between sources of lexicon and morphology may be enlightening in some cases but not in others.

But we know that morphology can be borrowed, even in the case of inflectional morphology, and that once it is borrowed it can be used productively in the recipient language. It is not an excessively common occurrence, but it does happen. Inflectional morphological systems may seem to be ‘closed’ systems which are immune to borrowings but this is not the case; their elements can be added to through the incorporation of forms transferred or copied or ‘borrowed’ from another speech tradition. And if such borrowing can happen, then we have to be aware that the evidence of items of inflectional morphology which are not recognised as borrowings may occasionally lead classifiers of languages astray in their attempts to classify languages genealogically. The idea that morphology is a better and more reliable guide to the genealogical classification of languages than even basic lexicon is did not originate, as some may think, with Antoine Meillet. The principle is as old as the works of the German Ethiopianist Hiob Ludolf (1624-1704; Waterman 1978 discusses Ludolf’s extensive linguistic correspondence with the German polymath G. W. von Leibniz), and it has been referred to as Ludolf’s Rule.

The fact that the evidence of bound inflectional morphology can lead us to a correct understanding of the classification of a language, even when evidence from basic and less basic lexicon may be ambiguous, is clearly shown for Haruai, a language of the Highlands of Papua New Guinea (Comrie 1988). Haruai exhibits precisely this kind of perplexing situation. Examination of such morphological evidence (specifically verbal inflection) shows that Haruai is genealogically related to Aramo since both are members of the Piawi family. Reliance on the evidence of the proliferation of items of shared basic vocabulary would wrongly suggest to us that Haruai is genealogically related to its neighbour Kobon. Now Kobon has much vocabulary in common with Haruai but shows no parallel morphology common to it and to Haruai exhibiting the equations of forms with meanings which indicate that two languages descend from the same ancestor.

I would add that if we must be aware of the dangers of the “false positives” which are proffered by massive amounts of shared basic vocabulary, we need also to be aware of the “false negatives” which a dearth of items of shared inflectional morphology also offer, disguising true linguistic relatedness. An example close to home will illustrate this graphically. English and French are related, distantly so but nonetheless related (the hundreds of lexical borrowings from English and similar forms of Germanic into French and the thousands of lexical borrowings from French into English are not genetic evidence). And yet they share about 120 items of lexicon which they have jointly inherited from Proto-Indo-European via Proto-Germanic or via Latin respectively (a list of
these forms, which includes over 20% of the Swadesh 207-list items, is at http://www.cs.ualberta.ca/~kondrak/cognatesEF.html; my thanks to Michael Cysouw for directing me to this source). They also share a minimal number of jointly inherited inflections. Most of these inflections (plural -s especially) now tend to reveal themselves in the written forms of the languages rather than the spoken ones, because of the effects of sound changes in the languages’ histories. But then both English and French have undergone extensive morphological attrition as a result of various factors, though their written forms sometimes disguise this. Languages with richer inflectional morphology would in general be expected to show a greater number of shared affixes (and maybe also a greater proportion of shared affixes) if they were genealogically related.

Yet sometimes morphological similarities, involving matches both of form and meaning which have been wrapped into a single morpheme, are the result of borrowing form one language to another. I here present examples from indigenous languages of North, Central and South America, involving nominal and verbal inflection, free and bound forms, borrowing between related languages, between unrelated languages and even one case involving borrowing where one donor language is a European-lexifier creole. The impact of borrowing from more prestigious languages on many Native American languages is often disguised and may be surprisingly pervasive, even though most of the attention and work on this subject has been devoted to examining the surface effects, or what Grant (2002) calls ‘transfer of fabric’ rather than ‘transfer of pattern’. For an example of an examination of more subtle contact-induced effects see Oswalt (1985) for a discussion of borrowed English idioms in Kashaya Pomo of California, where compound Kashaya verbs with literal meanings such as ‘run out of’ later acquire idiomatic senses of their English counterparts (here, for instance, acquiring the sense of ‘to find oneself short of some commodity’) as a result of Kashaya speakers’ increasing bilingualism in English.

Borrowing of morphological items (inflectional or derivational, bound or free) within indigenous languages in the Americas, has affected almost all parts of the grammatical system of at least one language. There are plenty of such examples available in a variety of structural situations. In some (but not all) cases such borrowings appear to add new features to the grammar of the recipient language, but more often they provide it with new ways of doing old things. Examples of this would be the borrowing of discourse particles, conjunctions or other elements which enable the construction of subordinate clauses which are not simply nominalisations. A notable case of this is the borrowing of Chukchi loans of this sort into certain forms of Siberian Yupik Eskimo (Comrie 1981, de Reuse 1994). Another case of borrowing involves Spanish loans of a similar structural nature into Mayan languages and other languages of Mesoamerica (Brody 1987, Stolz & Stolz 2001), and we note the incorporation of Spanish de ‘of’ into various contexts (including occasional use as a possessive marker) in some varieties of modern Nahuatl which also borrowed much basic vocabulary from Spanish (Hill & Hill 1981, 2004). Further examples of borrowed elements which on the balance of crosslinguistic evidence would presumably replace earlier structural subsystems are the borrowed pronouns in Pirahã which originate in the unrelated language Tupinambá, a Tupi-Guarani language (Thomason & Everett 2005) and the personal pronouns of Alsea, which bear a striking and surprising resemblance to those of Interior Salishan languages (Kinkade 2005).

But in many cases these borrowed forms presumably replace pre-existing elements or techniques. This is certainly the case with some bound forms. We may note for example the use of Aymara-derived directional affixes which evidently replaced some Quechuan directional affixes in certain Central Quechua varieties, such as those of Puno and Arequipa (Adelaar 1996:1328):

(1) tiy- ʰapi-
    live-constricting.movement
Here we find a Quechua stem being bolstered by an Aymara directional affix which with its voiceless aspirated stop (initial in the affix but word-medial in the Quechua word) violates the constraint within Quechua which states that aspirated stops can only occur word-initially. Quechuan languages already possessed directional morphemes and they use them to this day.

There is even the possibility that the Jibaroan language Shuar of Ecuador has apparently borrowed its negative suffix -ču from Quechua, presumably replacing a preexisting suffix or at least some kind of negative morph or set of such morphs (Adelaar & Muysken 2004:443)

(2) wi-  n'a-  ču
1SG-POSS-not

“it is not mine” (Karsten 1935:554).

But we cannot always be sure that these borrowed forms are replacive forms, as the diachronic depth of our coverage of these languages is not great and it does not show us that earlier pronominal systems were once present but have now been lost and replaced by borrowed elements.

My focus here is on borrowed inflectional morphology (and I believe that there are diachronic and other criteria which can justify making a distinction for certain purposes between inflectional and derivational morphs; cf. Beard 1998), and especially on the bound inflectional morphology which is associated with nouns and verbs.\(^2\) This last kind of morphology is the very kind of item which is least likely to be borrowed and it is also regarded, now as it was just over three centuries ago under Hiob Ludolf, as the best kind of evidence for linking two or more languages historically. To encapsulate the matter in a distinction which I first developed in 1998 and which was first published in a paper which appeared four years later, two years after its oral presentation (Grant 2002), all these instances of borrowing discussed here involve transfer of fabric, with or without concomitant transfer of pattern: actual morphological material is taken into one language from another. I provide word or sentence examples to accompany such borrowings wherever possible.

2. Noun inflection

In this section I discuss instances of borrowing inflectional morphemes relating to nouns. These include cases of the borrowing of the means of indicating noun plurality, the marking of local and other cases which in many languages are indicated by adpositions, the borrowing of the means of indication of ergativity, and in this final instance I illustrate a case of the adoption and integration of a borrowed set of noun-class markers as a new system of nominal classification into which the preexisting nouns of the recipient language are thereupon integrated.

\(^2\) The consideration which is most important here for our present purposes is that a cross-linguistic examination of the meaning and distribution of borrowed bound morphemes would show that derivational morphemes which serve to produce, say, verbs from nouns, or agentive nouns from verb stems, are borrowed and assimilated into the structures of many more languages than bound inflectional morphemes are. One need only think of the numerous derivational affixes of French, Latin and Greek origin which are productively used (even with stems of Old English or Norse origin) in modern everyday English, creating derived words of mixed Germanic-Latinate origin such as burial and washable. Muysken (1997a: 369, 371) shows that a similar process of assimilation and productive employment of some Spanish derivational affixes has taken place in Ecuadorian Quechua, such as in the word awa-dur ‘weaver’ (ibid. 371), which uses the Spanish agentive suffix -dor on a Quechua stem. Certainly the study of contact-induced language change suggests that derivational morphemes are on the whole more easily transferred and put to work in their recipient languages than inflectional morphemes are.
2.1. Borrowing markers of noun plurality

The most fruitful place to go looking for evidence of borrowed nominal morphology as instances of transfer of fabric is in the languages of the Andes, especially those spoken in Peru and Bolivia. (Adelaar & Muysken 2004 is an essential reference source here.) Two languages dominate here, Quechua in its numerous varieties, and Aymara, the major language of the Aymaran or Jaqi family, whose other members are Jaqaru and the closely related and highly endangered Kawki, both spoken in southern Peru. Setting aside for a moment the considerable influence which Spanish has had on all of these, we can see a long history of bidirectional interplay and interchange of material between Jaqi and Quechuan as families and latterly between various of their constituent members, which accounts for a shared pre-Spanish lexicon of between 20 and 30% of forms, even on the Swadesh lists (the proportion of shared lexicon between Quechuan and Jaqi rises a little when one examines non-Swadesh list items), and between either of these families and other languages in the area, such as Chipaya of Bolivia. Relatively few people now think that Jaqi and Quechuan are genealogically related at any non-trivial level (though Campbell 1995 suggests that they might be so, albeit at a very deep level). Certainly the vast majority of their obvious similarities are due to borrowing, generally going from Proto-Jaqi into Quechuan or later from Aymara into one or another variety of Quechua, but sometimes (as in the case of the several borrowed numerals) in the other direction.

What we are somewhat surprised to find is that the plural suffixes in Jaqaru and Kawki look oddly like that of Quechua, rather than like that of their closest linguistic relative Aymara. In Jaqaru -kuna ‘noun plural’ is borrowed from Quechua (presumably from a variety of Central Quechua, though Southern Peruvian Quechua has an identical suffix), as in

(3) chachull-kuna
   chachullo-PLUR
   ‘chachullo flowers’ (Hardman 1966:86).

The orthography here is slightly modified from the original source, where it is pointed out that this affix is rare in texts and that its absence from a noun does not imply that the noun is singular, both of which might suggest that it may be a fairly late acquisition in Jaqaru grammar were it not for the fact that the use of -kuna as a noun plural marker is not obligatory in Quechua noun phrases either. Kawki’s noun plural suffix -kuna is borrowed from Quechua too (Adelaar & Muysken 2004). But Aymara does not borrow a Quechuan form; it has -naka as its noun plural marker:

(4) wawa-naka-ha
   child-PLUR-1PL

In this regard both the Uru-Chipayan languages of southern Peru, namely Chipaya and the highly obsolescent Uru language or Uchumataqu, which are completely unrelated to Aymara, use as their noun-plural marker the affix -naka. An account of the Uru-Chipaya languages is provided in Adelaar & Muysken (2004:362-375). This source also mentions the fact that some Quechua case affixes have been incorporated into Chipaya structure but regrettably it does not identify which
these affixes are. At any rate, in Chipaya at least this pluralizing suffix has also entered the pronominal system as a means of forming plural personal pronouns. An example of the plural morpheme being used in the pronominal system is cited by Adelaar & Muysken from unpublished work on Chipaya by Rodolfo Cerrón-Palomino:

(5) *wer-naka lul-i-l oq-a-ča*
1-plur eat-go-I go-Future- Direct.Validation
‘We will go and eat’ (Adelaar & Muysken 2004:373, slightly respelt).

Direct Spanish influence is not alien to this picture either. Muysken (1997:432) points out that some varieties of Bolivian Quechua use the complex *-s-kuna* as a noun plural marker, combining the Spanish and Quechuan plural affixes, while some others can use the Spanish *-s* alone to mark plurality on nouns, without also requiring *-kuna*. (We can see this in the Bolivian Quechua equivalent of the Callahuaya sentence below.) Muysken adds there that Callahuaya, a mixed Puquina-Quechua secret language with some Spanish and Aymara elements which is used by a handful of curers in Bolivia as a secret language, uses either *-kuna* or the Quechua-Spanish compound form *-kuna-s* when it marks plurality in nouns. Translations of the same sentence into Callahuaya and Bolivian Quechua make this clear.

(6a) *laja-kuna, atasi-kuna, alkalde-tah isna-n-ku* (Callahuaya)
(6b) *qhari-s, warmi-s, alkalde-tah ri-n-ku* (Bolivian Quechua, slightly respelt)
man-PLUR, woman-PLUR, mayor-EMP go-3-pl
‘the men, the women and the mayor went’ (Muysken 1997b:432).

Another probable case of noun plural marker borrowing comes from a language spoken a few thousand miles north of the Andes, and involves the Salishan language Nuxalk (or Bella Coola). The Nuxalk noun plural may be marked with *-uks*, an element which can also be used in verb phrases to indicate the plural nature of the agent in intransitive verbs and of the patient in transitive verbs

(7a) *tl’msta ‘person’* (Nater 2000:137; transcription slightly modified)
(7b) *tl’ mstayuks ‘people’* (Nater 2000:137; transcription slightly modified).
(8) *wa-nus’ul-Xuks wa-tl’ikm-uks-Ø-c*
thief-Collective run-Collective
‘the thieves ran’ (Davis & Saunders 1997:100).

Unless the similarity between the two morphemes is due to chance, this morpheme *-uks* apparently derives from the Upper Chinook plural marker of the same shape; it has no parallels in any other Salishan languages. Nuxalk is the most divergent of the Salishan languages, and has a long history of borrowing elements from other languages (albeit mostly from nearby Northern Wakashan and sometimes Athabaskan languages: Nater 1984; Nater 2000 points out that Nuxalk

3 However, in an email dated 29 February 2008, Dr Sabine Dedenbach-Salazar Sáenz informed me that the case-suffixes in question are *-kama ‘like, as’* and *-layku ‘because of’*; this latter originates from Central Quechua (and Aymara) *-layku rather than from Southern Peruvian Quechua *-rayku*. 
loans from Chinookan have come in via the formerly widespread trade pidgin known as Chinuk Wawa or more often as Chinook Jargon). This is a surprising borrowing if it is a borrowing. The few hundred miles which separate the speakers of Nuxalk and the Chinookan peoples who live at the mouth and western reaches of the Columbia would at first glance present an obstacle to such borrowing, and so the means of transmission of such a form over such a long distance into an unrelated language (if that is what has happened) has yet to be accounted for.

Garifuna, the language of the Garinagu or Black Caribs (formerly of St Vincent and Dominica but latterly of Guatemala, Belize and Honduras and previously also of Nicaragua) is a Northern Arawakan (Maipurean) language. Yet it has borrowed very heavily from a number of languages. Notable among these are Antillean Creole French, Creole English, Spanish and Kali’na or ‘True Carib’, a Cariban language, the latter elements in Garifuna being the relics of a men’s jargon which partially relexified the Northern Arawakan language Igneri, which was closely related to but not identical with Arawak, and which provides the bulk of Garifuna’s basic morphology and lexicon. A full list of Kali’na elements in Garifuna, the vast majority of which are nouns and which are especially proportionally plentiful in the Swadesh 100-item list, has yet to be compiled (Taylor 1977:90-92 is a very useful list of borrowed Kali’na morphemes but is clearly not complete). Even so, my impression of the material of Kali’na origin in the language is that the number of elements probably does not make it much beyond three figures (and is thus a fraction of the number of elements from Antillean Creole French, for instance). Quite a bit of material has been produced on this language by several accomplished linguists, including some Garinagu themselves: a sketch grammar with texts and some vocabulary is available in Taylor (1977), while Escure (2004) is a fine modern account. Garifuna has borrowed a noun pluraliser which is applied to count nouns of any origin. According to Taylor, Northern Arawakan languages have a number of affixes with which to form plurals for different groups of count nouns, and this relative degree of systemic complexity may account for the fact that Garifuna -gu (as in Garina-gu ‘Black Caribs’) was taken, as Taylor points out, as a noun pluraliser from the Kali’na suffix -kon. (The differences in spelling between Garifuna and Kali’na pluraliser forms disguise the phonetic similarity of the two forms).

2.2. Borrowing elements of local and other kinds of case-marking

The examples which I have given so far are all instances of productively borrowed plural markers, adopting new morphological means, namely new affixes (sometimes where no equivalent affix existed before) as the primary way of marking plurality in the recipient language in question. Some languages have borrowed other kinds of bound noun morphology.

The most famous instance of this kind of borrowing is from a Chinookan variety of the lower Columbia River of Washington and Oregon. The variety in question, Wasco-Wishram (which is often classified with its sister-variety Clackamas as Kiksht) is now almost obsolete but it was spoken by people who were and are also fluent in a variety of the locally dominant Sahaptin language, namely Yakima. Wasco-Wishram is distinguished from other Chinookan languages by its use of a number of bound postpositions which act a little like Finnish local cases, and several Wishram case endings with fairly abstract senses (though not all such endings) derive from Yakima Sahaptin, as the great Edward Sapir (in a short survey inserted in Boas 1911:650-654; spelling here slightly revised) pointed out: -ba/-pa ‘at’, -bama ‘for’, -ĕnĕgi/-ngi ‘deriving from’, as well as the adposition àmēni ‘deriving from’ are all used freely with nouns of Chinookan origin and not just

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4 However, although Chinuk Wawa contains a number of Chinookan elements which are plural in form in terms of Chinookan grammar but which are construed either as singular or as numberless in Chinuk Wawa and which incorporate the affix -uks in their form (such as kamuks ‘dog’, pasáyuks ‘Frenchman’, sak’aluks ‘trousers’) Nater (2000) does not list these among the Chinuk Wawa borrowings into Nuxalk.

5 The terms Kali’na and Garina- are historically related.
with the Sahaptin loans into Wasco-Wishram (the number and nature of these still await fuller investigation).

(9) \textit{yakłakxáima il-k’əškaš aknîm-ba}
\begin{quote}
\textit{she.put the.child canoe-in}
\end{quote}
\begin{quote}
‘she put the child in the canoe’ (Sapir in Boas 1911:651).
\end{quote}

(10) \textit{gigwál-bam itk’iit}
\begin{quote}
\textit{under-from clothes}
\end{quote}
\begin{quote}
‘underclothes’ (ibid. 653).
\end{quote}

(11) \textit{it’áma ngi gagíya}
\begin{quote}
\textit{round.pointed.canoe by.means.of he.went}
\end{quote}
\begin{quote}
‘he went by canoe’ (ibid. 653)
\end{quote}

(12) \textit{alk’ádit ámni aqiúxwa}
\begin{quote}
\textit{tule in.origin it.is.made}
\end{quote}
\begin{quote}
‘it is made of tule’ (ibid. 652; orthographies slightly modified).
\end{quote}

Garifuna has done something similar, taking over several bound postpositions from Kali’na (as discussed in Taylor 1977:96-97). Although some of these seem to be confined to a small subset of nouns which are themselves of Kali’na origin (as such being reminiscent of Latin plurals in English. An example is -\textit{bu} when used in a phrase such as:

(13) \textit{béiabu ‘at the landing-stage’ (Belizean Garifuna)}.

But other endings are more widely used, an example being -\textit{da} ‘in, at’:

(14) \textit{múnada ‘at the house’ (Belizean Garifuna)}.

Other locative markers of Kali’na origin, such as -\textit{rána} ‘in the middle of’, and -\textit{uábu} ‘in front of’ can be used more freely within the language and not just with nominal forms of Kali’na origin (the examples here are taken from Taylor ibid.:97):

(15) \textit{ha-rána-guatu}
\begin{quote}
3SG.FEM-between-3PLUR
\end{quote}
\begin{quote}
‘she is between them’ (Belizean Garifuna).
\end{quote}

(16) \textit{ála k-uábu-thu}
\begin{quote}
may.it 1PLUR-in.front.of-set
\end{quote}
\begin{quote}
‘may it be set before us’ [an invitation to drink] (Dominican Garifuna).
Another apparent example of transferred noun morphology comes from the southwestern United States and involves a change in the position and status of a morpheme. The Arizona Tewa suffixal possessive marker -bi which is used with animate nouns has, according to Kroskrity (1985), its origins in a reconstrual of the Navajo and general Apachean third person possessive prefix bi-. This claim is somewhat surprising at first given the dearth of apparent or possible loans into Arizona Tewa from Navajo (Kroskrity 1993 mentions a grand total of three such loans out of a field lexicon of about 4500 items). Willem de Reuse (de Reuse 1995:220) is sceptical of this possessive marker being a borrowing and suggests that an etymology for the suffix should be sought somewhere within Tanoan. But although Kroskrity points out that –bi is a suffix of a similar form and meaning and occurs in Rio Grande Tewa, the other Tewa language, no similar affix with this meaning seems to present itself in other Tanoan languages. If this ending is not a borrowed item, then we have no idea where it originated. The phrase below shows how it is used.

(17) sen-bí khaw’
man-POSS song
‘the man’s song’ (Kroskrity 1993:61).

2.3. Borrowing ergativity markers

An example of borrowed nominal morphology which bridges the divide between morphology and syntax is found in some dormant languages of the central Oregon coast, specifically Alsea (and its poorly-attested sister-dialect Yaquina) and Siuslawan (involving both Siuslaw proper and its more fully documented sister-dialect Lower Umpqua), and is also reflected in the two Coosan languages, the more widely internally-diversified Hanis and Mihlik. These pairs of languages, whose genealogical interrelationship, if there is one, is occluded by waves of borrowing from one another and from other languages (in the latter respect from Chinuk Wawa and English), have been referred to in the linguistic literature as “Coast Oregon Penutian” because of their assumed membership in the as yet uncertain genealogical grouping in western North America sometimes known as the Penutian family (I prefer Penutian hypothesis). Each language was known in pre-European contact times to a few thousand people at most, and community practices such as slavery and a rather rigid social structure ensured that exogamy with partners who had a different first language was frequent.

Mithun (2000) has given an excellent report on this instance of borrowing. In work produced a little earlier, Grant (1997a, 1997b, 2002) discusses other contact-induced changes in these languages. Grant also discusses the extent to which similarities in these languages reflect shared inheritance from a common ancestor and also the degree to which such similarities involve borrowing of features from one language to another. According to Grant (1997a, 2002), the situation and the status of borrowing between the languages seems to resemble what Greenberg (1987:20) found about the nature of borrowing versus inheritance in English and French. Between Alsea, Siuslawan, and the Coosan languages there appears to be a hard core of shared morphemes, apparently inherited from a common ancestor, which inhere in the basic vocabulary and to some extent in the inflectional morphology, for example in the person markers.6 But these inherited items are outnumbered by waves of later borrowing of closely resemblant but borrowed forms which have

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6 For what it is worth, Grant (2002:40) found 40 resemblant forms on the 200-item Swadesh list existing between Hanis and Alsea out of a total of 172 comparable pairs for which data were available for both languages. This compared with 32 resemblant forms that were found to be shared between Hanis and Siuslawan and 24 between Alsea and Siuslawan. (There were at least two dozen gaps on the 200-item Swadesh lists for all the Coast Penutian languages, though not always for the same concepts.)
travelled in most or all directions between the three groups of languages (and there is also a thin
topsoil of later loans from Chinuk Wawa and English). The question of the sources of resemblances
between these groups of languages—whether they are borrowings or inherited forms—is an issue
which is neatly covered in Buckley (1987), a crucial paper in unravelling genetic and contact-
induced interrelations in Coast Oregon Penutian linguistics. Golla (1997) discusses a previously
undiscussed instance of language contact, the early lexical impact which Alsea has had on Wintu
and to a lesser extent on other Wintuan languages.

As Grant (1997a) had pointed out, the fact that Siuslaw and Lower Umpqua have an ergative
prefix and another prefix mî- which appears on a number of kinship terms7 which are evidently
borrowed from the prefix-using language Alsea, while Siuslawan languages use no other prefixes at
all (being ablauting and suffixing instead) is typologically noteworthy to say the least—and it is
something which demands historical explanation. An example is given below.

(18) mîtà
‘father’ (Lower Umpqua).

(19) mî- tà
one’s.father
‘father’ (Alsea) (both forms are taken from Frachtenberg 1922b:461).

The form is monomorphemic in Lower Umpqua but analysable and bimorphemic in Alsea.

In her paper, which draws upon published and unpublished work by the late Leo Frachtenberg,
notably his grammatical works on these languages (1918ms, 1922a, 1922b), but also upon his text
collections, Mithun shows that the Siuslaw and Lower Umpqua ergative8 marker prefix, which is q-,
has its origins in Alsean9, a family which itself borrowed that marker from Coosan, to the south of
Siuslawan and further to the south of Alsean. Both members of this latter language family use a
voiceless uvular fricative prefix in this function, which is here represented as x-; Alsean also has
this form as an allomorph of its ergative marker q-.

(20) temûhu: ya:sau’yáinx q=as
móluptsíní:sla as qatsí:li’:
So.then  again.told.him ERG=the Coyote the wolf
‘So then Coyote told the wolf again…’

---

7 It is paradoxical that lower numerals and the simpler kinship terms, which have long been taken by Indo-
Europeanists as the supreme starting-points for demonstrating the Indo-European affinities and heritage of a
hitherto unknown language, are among the items which it is easiest to show as being borrowed among native
languages of central coastal Oregon.

8 Frachtenberg (1922b) uses the term discriminative for this case.

9 It is true that one of Frachtenberg’s chief Lower Umpqua interpreters, William Smith, was a native speaker
of Alsea who spoke both a Siuslawan variety and Chinuk Wawa/Chinook Jargon as second languages, and
one might at first think that the occurrence of this prefix in his Lower Umpqua material was as a result of Mr
Smith transferring this feature from his first to one of his second languages. But this prefix also occurs in the
Lower Umpqua data which Frachtenberg collected and published from Mr Smith’s wife, Louisa Smith, who
as far as we know did not speak Alsea, though she was also conversant in Chinuk Wawa. Most of our
Siuslawan textual material represents Lower Umpqua.
What is really interesting from a diachronic point of view in Mithun’s analysis is her demonstration that the borrowing of the marker from Coos (presumably from Hanis rather than Miluk) into Alsean and thence into Siuslaw and Lower Umpqua did not of itself simply turn the borrowing languages from non-ergative languages into ergative languages, because they already exhibited some ergative syntactic features, including a predilection for what appear (at least on the surface) to be passivisation constructions. In the case of Siuslaw and Lower Umpqua there was also the means of indicating case differences within nouns by using ablaut patterns. A technique for the formation of nominal cases involving insertion of the vowel -á- into stems was already available.

Indeed, as in example (19) above and as Mithun points out, the borrowed ergative marker appears in Siuslawan only on first and second person pronouns and on certain nouns. The prefix appears to have originated in Coosan and to have passed from there (probably from Hanis Coos) to Alsea and then Siuslawan. A Hanis Coos example which occurs in a text in Frachtenberg (1913), taken from Mithun’s paper, is:

(23) x̂qainé:s  ka:s  tsxáu:wat  hæl  to:mîł
   ERG-cold    almost    lie-CAUS     that old.man

‘Cold almost killed that old man.’
(Hanis Coos; Frachtenberg 1913:38.2; cited in Mithun 2000:86).

Ablaut in any case was a vibrant derivational process in Siuslawan, for instance it served to distinguish nominal and verbal forms of the same Lower Umpqua stem:

(24) ūltií ‘snow’: walt ‘it snows’ (Frachtenberg 1922b:449).

But it seems that the transfer of the originally Coosan prefix into the recipient languages had made the marking of ergativity more perceptually salient and more unambiguous for speakers of those languages in certain morphosyntactic circumstances. In this instance borrowing a morpheme has had an impact both on morphology and syntax.

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10 This is what may have happened when Ngandi of northeastern Arnhem Land borrowed an ergative suffix from the unrelated Ritharrngu language (Heath 1981).
2.4. Borrowing noun-class systems

Finally, there is an example of a language, Resígaro, acquiring a whole noun-class system. A partial parallel from a stable mixed language would be the way in which the non-Bantu noun vocabulary of Ma’á was provided with the affixes of a Bantu noun-class system (Mous 2003). But this is only a partial example, since the paralexification which is so characteristic of Ma’á—this term refers to the development of two parallel labels, defined according to in-group or more everyday sociolect, for each semantic concept throughout the vocabulary—has not operated in Resígaro, which is not a sociolect of another language. Resígaro (Aikhenvald 2001, Seifart 2007) is an extremely endangered Arawakan language of southern Colombia, and has borrowed not only the means of plural marking (and also the numbers ‘1’ and ‘2’) but has also taken over wholesale a system of noun-class markers from the dominant local language Bora, a Witotoan language in which speakers of Resígaro have traditionally been bilingual, despite the fact that speakers of Resígaro have (from what Seifart 2007 suggests; see also Payne 1985) borrowed little vocabulary from Bora. Transfer both of fabric and of pattern has occurred here, sometimes simultaneously:

(25a) okáhi-m tsi (Bora)
(25b) anóógi-m si (Resígaro).

tapir-CLASS.PLUR
‘two tapirs’ (Seifart 2007).

3. Verbal morphology

Instances of productively borrowed verbal morphology in Native American languages are not as frequent as those from the nominal sphere, since verb morphology tends to be more complex than noun morphology. Cases of borrowing are harder to find, but some appear in the literature.

One case from a language of British Columbia involves the Interior Salishan language Lillooet and parts of its Coast Salishan component Lillooet is a Northern Interior Salishan language which has absorbed a number of elements from Coast Salishan languages such as Squamish, just as, though to a lesser extent, as Lillooet’s close relative Ntlaka’pamux or Thompson). The two groups of Salishan languages are similar enough in typology and in superficial features such as segmental phonology for plenty of such transfers to have taken place, though mostly transfers went in the direction from Coast to Interior Salishan.

A work which was unavailable to me in Britain and in Berkeley and which I first encountered at the wonderful library of the MPI-EVA in Leipzig, namely Kuipers (2002:219-231), lists forms in Lillooet and Thompson which have been borrowed from nearby Coast Salishan languages, most probably from Squamish, and it makes sense to treat them all together here. Such borrowed forms include about 10% of the elements which would appear on a Lillooet translation of the Swadesh list, and also a number of affixes, including some members of the typically Pacific Northwestern morphological or lexical genre of ‘lexical suffixes’ (items with nominal meaning which are used as bound morphemes with other morphemes and which need not resemble in shape corresponding full nouns). Examples of borrowed lexical suffixes are -az’ ‘tree’, -c ‘mouth’, -q” ‘head’:

(26a) t’aq’-az’ ‘salal berry bush’ (van Eijk 1997:37).
(26b) súp-c-ám ‘to scratch one’s mouth or lips’ (van Eijk 1997:81).
(26c) súp-q”-ám ‘to scratch one’s head’ (van Eijk 1997:95).
But there are also some borrowed free grammatical morphemes, including a subordinate clause marker $k^\nu \sim k^\nu \bar{e}$ (where $\bar{e}$ is schwa), which can serve as a proclitic and which, as in the example below, can form part of other subordinating conjunctions. Van Eijk’s grammar provides us with examples of the use of the latter, for instance:

(27) $swáts\text{-ka} \ k^{\nu}\text{-s-ka-mays-c-án-a} \ lk^{\nu}\text{únsa}$

I hope SUBORD- can-fix- it- can today

‘I hope that I will be able to fix it today’ (Van Eijk 1997:187).

Pages 219-220 of Kuipers’ account are the most informative for present purposes, as these discuss the diffusion of some verbal affixes, which have also been borrowed from Squamish to Lillooet, and this fact is what is most relevant to this section. The verbal affixes which have been borrowed include the person markers -$mx$, which expresses the first person singular object of what was once a causative paradigm, -$ap$ “s/he or it acts upon you plural”, -$wit$ “X acts upon them, they act upon you plural” and -$mul$ “it acts upon us” in the neutral paradigm.\textsuperscript{11}

(28) $'inwat \ -wit \ -as \ -kl$

say -3PLUR-SUBJUNCTIVE-FUTURE

‘I wonder what they will say’ (van Eijk 1997:147).

(29) $cút;k-al’ap$

say-INDIC-2PLUR

‘you guys say’ (van Eijk 1997:146).

(30) $x^{\nu}itēn-s-tumx$

whistle-at-me

‘whistle at me!’ (van Eijk 1997:151).

(31) $x^{\nu}itēn-s-tāmul$

whistle-at-us

‘whistle at us!’ (van Eijk 1997:151).

These borrowed morphemes do not encode previously unfamiliar features; rather, they fill pre-existing slots which were already available in the highly complex verbal morphology of Salishan languages.

Garifuna, too, has incorporated a borrowed item into its heavily flexional verbal morphology, although this item is a free rather than a bound morpheme. The Garifuna preverbal future or irrealis particle $me$ derives from Kali’na (Taylor 1977:97). This adoption may have been assisted by the prior presence in Garifuna of a non-borrowed free grammatical morpheme $buga$, which behaves in

\textsuperscript{11} After the oral presentation of this paper one discussant claimed that since most of the instances involved issues in plurality they did not truly reflect borrowing of inflectional morphology, because pluralisation could be construed as a derivational concept. This point of view about the derivational nature of pluralisation did not win the day.
the same way and which has past reference. The form *me* in Kali’na is a particle which means ‘as, when, in order to be or become’ (Hoff 1968). Its meaning in Garifuna has changed since the time of its transfer into the language from Kali’na, and indeed in Honduran Garifuna it increasingly refers to past rather than to future events:

(32) **dan-bwei me-ha h-eidin mutu ouchaha Kalifuna**

    time-past past-particle they-go people fish Kalifuna

‘Formerly people used to go fishing at Kalifuna’.

(Honduran Garifuna; Escure’s orthography in Escure 2003:57).

One rare instance in the world’s languages of borrowing a piece of grammar—an actual morpheme, albeit a free one—from what could be construed as a form of English comes from Miskitu, an American Indian language of eastern coastal Nicaragua which is genealogically related to the Northern and Southern Sumu languages and to the extinct Matagalpa and Cacaopera languages of lower central America in the Misumalpan family. Miskitu-speakers have had 350 years of contact with speakers of English, especially Creole English, and their language has borrowed plentifully from this source (much more so than they have from Spanish, though the situation seems to be changing, given that Honduras and Nicaragua both have Spanish as their official language and education is becoming more widely available on the Atlantic coast). The Pearl Lagoon Basin variety of Miskitu, which is spoken in a few villages on the coast, including Raitipura and Kakabila, is especially strongly influenced by Miskito Coast Creole English, in which almost all speakers of this form of Miskitu are fluent (and in which some are dominant). This variety, which is most related to the Miskitu dialects of the Sandy Bay area of northern coastal Nicaragua, of which it seems to be an offshoot, has yet to be the subject of a full linguistic description, though in general its structural and lexical features resemble those of other Miskitu varieties; dialectal diversity within Miskitu is not particularly great and it does not impede intercommunication. Mark Jamieson and Ross Graham have done descriptive work on this variety but most of their results are still unpublished.

I had the opportunity to do about an hour’s fieldwork on this language and on Miskito Coast Creole English, working through the medium of Spanish with a speaker then in her early forties who came from Kakabila when we were in Manchester, England in early 2002, and I still have access to material from a native speaker, the niece of my 2002 consultant. Pearl Lagoon Basin Miskitu speakers have borrowed the particle *don* from Creole English *don* (originating in English *done*) and use it to form a verb group which has a sense of completed action, thus adding a perfective aspectual distinction to the older Miskitu verb group. I would like to thank Mark Jamieson and Neisy Schwartz Jamieson for the following example, which was spontaneously produced in the course of an everyday conversation and which is an utterance in perfectly normal Pearl Lagoon Basin Miskitu.

(33) **Yang don tak -ri inska ba klin mun -i**

    I CMPLT emerge-past fish the clean cause-verbal noun.

‘I’ve finished cleaning the fish’.

We may further note here the use of the verb stem *klin* from English ‘clean’. This too is perfectly normal Miskitu usage, as Miskitu has borrowed and assimilated a greater amount of basic and non-cultural English vocabulary and has relexified more considerably towards English than any other
language of the Americas has.\textsuperscript{12} \textit{Klin munaia}, literally ‘clean-instigate’, means ‘to clean something’ or ‘to make something clean’, while its counterpart, \textit{klin takaiia} ‘clean-emerge’ would mean ‘to be cleaned’. Both auxiliaries are used frequently in all varieties of Miskitu when conjugating verbs, especially those where the lexical stem is of English or Spanish origin, but they are especially frequently used in Pearl Lagoon Basin Miskitu.

4. Conclusions

The vast majority of work on historical linguistics over the past three centuries has shown that Hiob Ludolf’s observation was correct: other things being equal, morphology is a surer guide than either lexicon or phonology are to indicating the genealogical relationship of two or more languages. The data on the languages above reinforce his view. As far as the operation and results of the Comparative Method (insofar as it has been applied to these languages) will let us tell, the bulk of the inflectional morphology in the languages discussed above either originated in the respective proto-languages or in many instances it has been innovated or developed in the course of the history of these languages, so that much of the material making up such morphology is thus a reliable indicator of the genealogical affinities of these languages. Borrowing is simply not a major source of morphemic renewal in these languages’s structures. One looks in vain for evidence of wholesale borrowing of person-marking prefixes on verbs, for instance. Some classes of morphemes seem to remain closed and are not opened by instances of borrowing in the languages of Native America.

And yet sometimes morphology, even bound inflectional morphology, can be borrowed into a language system and can find a home in its recipient language successfully. It can be absorbed into the new system to such an extent that its successful absorption into the structure of the recipient language allows it to attach itself onto stems which were already present in the language millennia before that piece of bound morphology was borrowed. Examples of this kind of pattern transfer in which items of old morphology are replaced by items of borrowed morphology are fairly uncommon anywhere, and they are not especially frequent in the Americas. (Morphological change through the metatypic replication of the structural patterns of a more prestigious language by speakers of a less prestigious language has probably played a greater role in terms of contact-induced structural change in the languages of Native America, although we cannot be certain.) But then the borrowing of basic lexicon, and more specifically the widespread replacement of pre-existing items of basic lexicon through borrowing rather than through other means such as nominalisation of verbal roots, is an especially uncommon phenomenon in the languages of Native North America, and indeed elsewhere in the Americas.

There are some major exceptions to this. One such is the situation which obtains between Quechuan and Jaqi (mostly but not entirely involving borrowing from Jaqi into Quechuan), in which so much basic vocabulary exhibits similar forms of meanings in the two language families and yet which show so little inflectional morphology which might be adduced in an attempt to prove their ultimate genealogical connectedness (see Cerrón-Palomino 2000 for a good account of this). Another exception is the Kali’na impact on Garifuna, which involves the one-way (Kali’na -> Garifuna) transfer of some morphological forms of varying degrees of frequency in addition to a considerable amount of lexicon, especially many high-frequency nouns (only one item in eight in the list of Kali’na loans into Garifuna in Taylor (1977:90-92) can be construed, even with some

\textsuperscript{12} There are basic borrowings from a more local source too, and these may reflect an instance of typological change in Miskitu. Mark Jamieson (p.c.) has informed me that Miskitu adjectives, which employ a type of nominal inflectional morphology, include a high proportion of common items which formally resemble Northern Sumu stative verb forms, although, some personal pronouns apart, there are not many other elements which are of probable Sumuan origin in Miskitu (Miskitu influence on Sumu vocabulary is stronger but probably more recent). This matter remains to be investigated further.
imagination and considerable semantic licence, as being a verb). And yet the number of shared morphemes in Quechuan languages on the one hand, especially in Southern Peruvian varieties and in diasporic varieties which derive from these, such as Imbabura Quechua of Ecuador (Cole 1982), and Inga of Colombia (documented for instance in Levinsohn 1976) and in Jaqi on the other hand is much greater than the number of Kali’na morphemes found in Garifuna, though neither amount is nugatory. This is as true of Swadesh list items as it is of other items (I have counted 43 loans from Kali’na and other languages on the Garifuna version of the Swadesh 207-item list as distinct from at least 52 loans from Jaqi on the Cuzco Quechua Swadesh 207-item list). However the Kali’na morphological elements inhere in Garifuna morphology somewhat more solidly than the Jaqi morphological element in Quechuan does (indeed inflectional morphology of Jaqi origin is absent in most Quechuan dialects, and although Quechuan and Jaqi morphological typology is very similar, the actual endings involved are usually quite different in shape). Again the borrowed Jaqi elements in Quechuan varieties are largely nominal forms, though there are more verbs among them than one finds in the Kali’na stratum in Garifuna, which is more varied in respect of the range of form classes which are represented in it. And neither of these, nor yet any of the other languages surveyed, show such a division of origin within their systems of inflectional morphology as we find in some of the stable mixed languages surveyed in Appendix 1.

This contrast between the Quechuan-Jaqi and Garifuna situations and their outcomes brings home the fact that although the impact of one language upon another may be very considerable, what we see here, and indeed in the other cases of bound inflectional morpheme borrowing from the Americas, is the discharging of certain processes of contact-induced language change which are also found in other languages all over the world, but which manifest themselves in different ways. It is just that in these two situations what we continue to dub with the shaky shorthand of “borrowing” has gone so much deeper. Yet the outcomes of these processes are very different. Both Cuzco Quechua and modern Garifuna will fascinate anyone who is concerned with the study of intimate language contact, yet neither is a mixed language in the way that Michif, Callahuaya and Media Lengua are. And the kinds of items which each has absorbed often differ between the two languages.

In another case, the Alsean, Siuslawan and Coosan languages show what happens when sets of languages, which may or may not have a common ancestor (and which were each spoken by groups that were small enough to have made extensive xenoglossic intermarriage a desirable practice, thus assuring steady supplies of bilinguals and multilinguals), exchange large numbers of morphemes of all kinds. The borrowing and adoption of an Alsean prefix into Siuslawan, previously a solidly suffixing language group, is one of the most remarkable outcomes of language contact in the Americas. The change reflects an unusual expansion of the possibilities in a language’s morphological typology.

But a reading of the sources cited in this paper shows that almost all the languages in which borrowed morphemes are exemplified in this paper are characterised by a high degree of lexical borrowing, of both basic (including Swadesh list) and non-basic vocabulary, and by a considerable amount of replacement of inherited vocabulary by borrowed items. (Arizona Tewa is the most glaring exception to this principle; Jaqaru and Kawki have borrowed heavily from Central Quechua and Spanish, Chipaya has borrowed much from Aymara and Quechua, Nuxalk from the Wakashan language Heiltsuk, Garifuna from Kali’na but also from Antillean Creole French, Spanish and English, Lillooet from Squamish or other Coast Salishan languages, Miskitu from Creole English and Spanish, Shuar from Quechua, Wishram from Sahaptin. Alsea, Siuslawan and Coosan seem to have borrowed vigorously among themselves, while Alsea may possibly also have borrowed a number of elements from a Salishan language, as Kinkade’s 2005 discussion of Alsea pronouns, posthumously published, might suggest.) Looking at these instances, we can see that heavy lexical borrowing from one language into another does not seem to be a predictor of structural influence.
through contact-induced change, but the latter seems to apply, especially in respect of transfers of morphemic fabric from one language to another.

Borrowing, and indeed contact-induced language change in general, is a resource which is called upon relatively infrequently among the various means of morphological change. When we compare the degree of its effects on many languages with those of, say, analogical extension, phonological erosion, or even the loss of a structural feature from a language and the loss of the morphemes which encode it, its effects in the languages of Native America are limited. But the evidence (especially from nominal morphology) is clear enough from an examination of such cases as they occur in languages throughout the Americas. We can longer say that the presence of an item in a particular language through its acquisition by borrowing cannot be used as an explanation of the presence or occurrence of a particular morpheme in a language. Nor can we now say that a morpheme of such a sort (even a morpheme which acts as a bridge of the morpheme-syntax interface such as the ergative marker in Siuslawan) simply cannot be borrowed as a matter of principle, or as a matter of diachronic doctrine. Evidence such as that presented above would prove us wrong.

Morphological distinctions can be added to or reinforced in a language in many ways, and most of the cases of borrowing exemplified in this paper involve the replacement of the means of expressing a feature, rather than the addition of new features to the typology of a language. One of these is through borrowing items which encode such distinctions or concepts, and by virtue of receiving such additions, previously “closed” morphological systems can be shown to be “openable” (if I may use a neologism combining a Germanic stem and a Latinate derivational affix). Furthermore, the kinds of affixes which can be borrowed are not limited to those types (prefixes, suffixes or whatever) of which the language previously availed itself. New classes of affixes can be taken over into a language. The epistemological escape hatch labelled “it can’t be borrowed” is closed forever.
## Appendix 1. Sources of various kinds of elements in four stable mixed languages.

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<th>Segment</th>
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<th>Media Lengua</th>
<th>Mednyj Aleut</th>
<th>Michif</th>
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<tr>
<td><strong>Overall lexicon</strong></td>
<td>Mixed: Bantu, West Rift and Eastern Cushitic, Maasai</td>
<td>85-90% Spanish; rest Ecuadorian Quechua</td>
<td>Predominantly Attuan Aleut; some Russian</td>
<td>French and Plains Cree, many English loans</td>
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<tr>
<td><strong>Swadesh-list lexicon</strong></td>
<td>Mixed: West Rift Cushitic predominates</td>
<td>Predominantly Spanish</td>
<td>Almost all Aleut</td>
<td>52% Cree; 47% French, 1% English</td>
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<tr>
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<td>Cree for Cree component, French for French component</td>
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<td><strong>Canonical syllabic phonology</strong></td>
<td>Bantu; only open syllables</td>
<td>Hispanised Quechua (CC-, etc.)</td>
<td>Aleut and Russian elements pretty much intact</td>
<td>Cree and French components intact</td>
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<td><strong>Nouns</strong></td>
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<td>Mostly Spanish</td>
<td>Aleut (but many less basic Russian nouns)</td>
<td>Overwhelmingly French</td>
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<tr>
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<td>Etymologically mixed</td>
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<td><strong>Adjectival morphology</strong></td>
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<td>Spanish with Quechua typological influence</td>
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<tr>
<td><strong>Adpositions</strong></td>
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References


