Typological and social constraints on language contact: Amerindian languages in contact with Spanish

Gómez Rendón, J.A.

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Chapter 10

Comparative analysis: lexical borrowing

This chapter deals with Spanish lexical borrowing in the corpora of the three languages under study. I focus on the major parts of speech identified for Spanish (cf. section 5.3) which correspond to the four syntactic slots described in the model of parts of speech by Hengeveld (1992) and Hengeveld et al (2004): head of referential phrase (nouns); head of predicate phrase (verb); modifier of referential phrase (adjective); and modifier of predicate phrase (adverb). The first section addresses the issue of how Spanish loanwords from these classes are adapted to the phonology and morphology of the recipient languages. The second section discusses the statistics from the analysis of lexical borrowings in the corpora and how they differ from language to language. The third section analyzes the distribution of lexical borrowings across the major parts of speech, the cross-linguistic tendencies observed and the linguistic and nonlinguistic factors at work. The fourth section scrutinizes the use of Spanish loanwords from the four lexical classes in each recipient language. The fifth section evaluates the influence of dialectal and sociolectal variation on the borrowing behavior of speakers: it explores differences in the amount, type and use of lexical borrowings from different dialectal areas and different groups of bilinguals. The general goal of the chapter is to identify tendencies in the amount, distribution and use of Spanish loanwords according to lexical classes, dialects, and levels of bilingualism. Each section tests a set of borrowing hypotheses and examines the respective weight of linguistic and nonlinguistic factors. The discussion of figures and tendencies is supported with abundant examples from the corpus.

10.1. Morpho-phonological adaptation of Spanish lexical borrowings

One major difference between codeswitching and lexical borrowing is that borrowed items, unlike switched ones, usually follow the morpho-phonological patterns of the recipient language\(^1\). Depending on the level of bilingualism of the speaker (the more bilingual the speaker, the less adapted the loanword) or the age of the loanword (the older the loanword, the more adapted to the recipient language), adapted forms are usually perceived as native forms. Being of relevance not only for the study of lexical borrowing, the present section describes the morpho-phonological processes

\(^{1}\) There is a number of unassimilated loanwords in the corpora which are fully integrated to the morphosyntax of the recipient language. This integration distinguish them from code switches (cf. 4.2.2).
of adaptation experienced by Spanish lexical items in the recipient languages under scrutiny.

The three languages show different degrees of loanword assimilation depending on the level of bilingualism of the speakers. In general Otomí speakers have lower levels of bilingualism, and therefore they tend to assimilate loanwords on an idiosyncratic basis, which results in a wider phonological variation eventually influencing the number of types in the corpus. In contrast, Guaraní speakers show a tendency towards non-assimilation, which is associated with their higher levels of bilingualism. Gregores and Suárez (1968: 29) found the same phenomenon of non-assimilation in their corpus of Paraguayan Guaraní. Quichua speakers, in turn, show different degrees of assimilation depending on the dialect in question and the levels of bilingualism associated with it. In the following I describe the principal mechanisms of assimilation in each recipient language.

10.1.1 Quichua

The adaptation of Spanish borrowings in Quichua involves two distinct processes. One is the accommodation to morpho-phonological patterns. The other is the freezing of loan forms (bound morphemes and lexical chunks) in non-analyzable units. Each process is discussed in the following.

The majority of Spanish loanwords are fully or partially assimilated to the phonological patterns of Imbabura Quechua. Unintegrated loanwords represent only a small number. The integration of Spanish loanwords depends heavily on an interaction of factors including age, frequency, pragmatics and discourse. Thus, an old loanword frequently used in discourse is always integrated to Quichua phonology while a recent loanword, even if frequently used, is only partially assimilated.

The phonological integration of Spanish loanwords involves mainly vocalic changes. Spanish medial vowels are generally raised (/e/>/i/, /o/>/u/) or otherwise pronounced as close as possible to their Quichua equivalents, as illustrated in (1).

\begin{enumerate}
\item [1)] a. Q [mída] \quad <\text{Sp. /mísa/ ‘table’} \\
    b. Q [mída] / [míza] \quad <\text{Sp. /mísa/ ‘mass’} \\
\end{enumerate}

Assimilation vary across idiolects, resulting in different pronunciations of the same word. Partial assimilation is frequent in words with several medial vowels, as shown in (1c). Words with more than one medial vowel have different phonetic realizations depending on their environment and frequency of use. The less frequent a loanword in everyday speech (i.e. the more external to basic vocabulary), the less assimilated to Quichua phonology. If assimilation produces homophones like (1a) and (1b), they
are disambiguated by various phonotactic mechanisms (e.g. the voicing of the sibilant). A further factor influencing phonological integration is the level of bilingualism of the speaker. The three realizations of the Spanish loanword in (1c) can be correlated to three decreasing levels of bilingualism, with the first realization corresponding to an incipient bilingual, the second to a subordinate bilingual, and the third to a coordinate bilingual.

The phonological adaptation of Spanish consonants is less frequent. One of the few consonant changes concerns the velarization of the fricative labiodental /f/, as illustrated in the following examples:

2)  
   a. Q [xifu] < Sp. /fierro/ ‘(piece of) iron’
   b. Q [xurkita] < Sp. /forketa/ ‘pitchfork’

Both word forms reflect a typical Spanish American pronunciation and contrast with their Peninsular equivalents hierro [yero] and horqueta [orketa], both of which do not involve consonant onsets. The presence of a velar onset in the following loanword – which originally lacks a consonant onset – suggests that it was borrowed in an earlier phonological stage of the source language:

3)  Q [xazinda] < Sp. /asienda/ ‘estate’

The loanword [xazinda] in (3) resembles the sixteenth-century pronunciation of contemporary Spanish hacienda ‘estate’. Accordingly, the velarization illustrated in (3) is rather a phonological adaptation of an old Spanish word form. Notice also the sonorization of the intervocalic sibilant in the same example.: Another process of loanword assimilation is metathesis. The nature of this process is not only phonological but also morphological in so far it affects the syllable structure of loanwords. The order of syllables changes in some cases while syllables are replaced or simply deleted in others. Consider the syllable deletion in (4a) below. In a few other cases metathesis affects not the syllable proper but only a particular feature. This is the case of (4b) where the palatality of /h/ goes to /u/.

4)  
   a. tempora < temporada (season, time)
   b. sañora < zanahoria (carrot)

The morpho-phonological integration of loanwords involves semantic changes too. Certain nouns and verbs are borrowed in the guise of other nouns and verbs but with different meanings:

5)  
   a. rifuirso (effort) < refuerzo (reinforcement)
   b. kontrarina (to meet) < encontrar (to meet with)
Verbs are particularly prone to morpho-phonological changes whereas nouns, adjectives and adverbs are less so. The integration of Spanish verbs in Imbabura Quechua involves the drop of inflectional endings. The resulting verbal root becomes the base form to which Quechua verbal morphology is added. The following example illustrates this process for the verb *tocar* ‘to play’. The raising of the stem vowel occurs also in this case.

6) \[ \textit{tuka-ni} \quad < \quad \textit{toca} \quad \text{‘play’, ‘touch’} \\
\quad \text{play-1.PRS} \\
\quad \text{‘I play (music)’} \]

Once adapted to Quichua morpho-phonology, loan verbs behave exactly as any other verb. In (7) below the causative \(-\textit{chi}\) and the gerund \(-\textit{shpa}\) are suffixed to the Spanish verb root. The two meanings of Spanish *acabar* (‘finish something’ and ‘finish’) collapse in one (‘finish something’) because the causative \(-\textit{chi}\) allows only a transitive reading.

7) \[ \textit{akaba-chi-shpa-mi} \quad < \quad \textit{acaba} \quad \text{‘finish’} \\
\quad \text{finish-CAUS-GER-VAL} \\
\quad \text{‘making [someone] finish [something]’} \]

The second process of loanword adaptation involves the freezing of bound morphemes to their roots. The freezing of nouns and plural markers is shown in (8).

8) \[ \begin{array}{ll}
\text{a. } \textit{barbas} & < \text{barba+s} < \text{beard+PL} \\
\text{b. } \textit{huasipunguero} & < \text{huasipunguer+o} < \text{hacienda.worker+M} 
\end{array} \]

The borrowing of roots along with bound morphemes does not imply however the productive use of the latter in the recipient language. With a few exceptions Spanish bound morphemes do not occur in native forms. Evidence of this is the co-occurrence of the Quichua plural marker with the Spanish plural ending in pseudo double-marked constructions like (9).

9) \[ \textit{kosas-kuna-ka} \quad < \text{cosa+s} \quad < \text{things+PL} \\
\quad \text{thing:PL-PL-TOP} \\
\quad \text{‘the things’} \]

Loan adjectives usually occur with gender markers (10a), diminutives (10b) and superlatives (10c). Here are some examples:
The second type of freezing occurs across word boundaries. Loan phrases are chunks of words forming a phrase in the source language which are borrowed as indivisible units with their own meanings. The following are the most frequent loan phrases in the corpus of Imbabura and Bolivar Quichua. Notice the phonological assimilation in each case:

10)  
- a. kurius < curios+o < curious+M  
- b. mamita < mam-it-a < mother+DIM+F  
- c. papaso < pap-as-o < father+SUP+M

The main characteristic of loan phrases or phrasal borrowings is that their original constituents cannot be detached from the phrase, modified or otherwise subject to any derivational or inflectional mechanism. This is exemplified below:

11)  
- a. dirripinti < de repente (suddenly)  
- b. diunabes < de una vez (at once)  
- c. diltodo < del todo (completely)  
- d. masuminos < más o menos (more or less)  
- e. namaski < nada más que (only)  
- f. unsolu < uno solo (only)  
- g. diuslapagui < dios le pague (thank you)  
- h. kalsunbaju < calzon bajo (long-trousers)  
- i. diberas < de veras (really, actually)  
- j. kaduno < cada uno (each)  
- l. ilkimas < el que más (everybody)  
- m. loki < lo que (which)  
- n. inki < en que (what)

In (12a) accusative and plural markers can be attached to the whole phrase kalsun-bajo ‘long-trousers’ but not to either of its original constituents. In (13a), too, emphatic markers are suffixed to the entire loan phrase di-una-vez. These markers cannot be attached to one of the original constituents because the outcome is an ungrammatical construction like (12b) or (13b). Phrasal borrowings follow the same
The constituent order of Quichua syntax. This is illustrated in (14a) below, where the verb occurs in sentence-final position, after the subject (loan phrase ilkimas ‘everybody’) and the object (rundin ‘pan flute’). In (14b) the dislocation of the subject produces an ungrammatical sentence. Similarly, the dislocation of the loan phrase kaduno ‘everyone’ produces an ungrammatical sentence (15b) different from its grammatical counterpart (15a).

14) a. kunan-ka ilkimas rundin tuka-ria-n
d. kunan-ka rundin (ilkimas)* tuka-ria-n
today-TOP everybody pan flute play-DUR-PRS.3
‘Nowadays everybody plays the pan flute’

15) a. kaduno sirbinti-kuna-ka puri-ju-rka
d. sirbinti-kuna-ka (kaduno)* puri-ju-rka
everyone servant-PL-TOP go-PROG-PST:3
‘Every servant used to go (there)’

Phrasal borrowings include noun phrases (e.g. 11h), prepositional phrases (e.g. 11a-c), and adverbial phrases (e.g. 11d-e). The only frozen verb phrases in the corpus are o-sea ‘that is’, with the third-person present subjunctive form of the verb ‘to be’; and the formula dius-si-lu-pagui ‘may God reward you’, itself an entire clause. Phrasal borrowings do not necessarily perform the same syntactic function as the original phrases in Spanish. Typically, phrasal borrowings modify predicate and referential phrases. They occur as heads of referential phrases and as connectives. A functional analysis of phrasal borrowings is presented in section 10.4. The frequency of phrasal borrowings in Quichua is higher than in the other languages.2

The criteria used to distinguish phrasal borrowings from code switches are both phonological and morphosyntactic. On the one hand, phrasal borrowings have a distinctive stress pattern – main stress on the penultimate syllable following the stress pattern of Quichua words. This feature shows that phrasal borrowings are treated as one lexeme.

<table>
<thead>
<tr>
<th>Phrasal Borrowing</th>
<th>IQ</th>
<th>Sp</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ilkimas</td>
<td>/ _ - _ /</td>
<td>/ _ - _ /</td>
</tr>
<tr>
<td>Masuminos</td>
<td>/ _ - _ - _ /</td>
<td>/ _ - _ - _ /</td>
</tr>
<tr>
<td>Diuslupagui</td>
<td>/ _ - _ - _ /</td>
<td>/ _ - _ - _ /</td>
</tr>
</tbody>
</table>

A number of phrasal borrowings correspond to noun phrases referring to entities or concepts proper of Mestizo society (e.g. institutions, practices, etc.). In the following

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2 The frequency and productivity of lexical chunks of the type analyzed here are documented for massively relexified varieties of Quichua in Imbabura and other areas of the Ecuadorian Highlands (Muysken 1985; Gómez Rendón 2005).
excerpt a loan noun phrase (in square brackets) co-occurs with single lexical borrowings (in slashes):

\[
\begin{align*}
\text{chayka /}\text{primero}/ & \text{ watatakta /}\text{nivela/shpa /}\text{kwinta/ /kida/parka,} \\
\text{chayra kay watami /}\text{primero/guman yaskushka kapan, /primer año} & \text{de colegio} jman, \text{ chayka ninanda adilantashka kashka chaymanga.}
\end{align*}
\]

As required by Quichua morphological rules, the allative suffix \text{-man/} is attached to the whole phrase and not to any of its constituents. According to Myers-Scotton (2002: 141ff), these phrases are ‘matrix-language islands’, i.e. phrasal units composed of embedded language material (e.g. Spanish) whose morphosyntactic matrix (bound morphology and constituent order) come from the matrix language (e.g. Quichua), that is, they are morphologically integrated to the recipient language.

Another morphological process involving phrasal borrowings is reduplication. Consider the following example from the corpus:

16) \text{bulla-bulla}^3 \quad \text{shamu-rka-nchi-ka} \\
\text{noise-noise} \quad \text{come-PST-1PL-TOP} \\
\text{‘We came noisily.’}

Reduplication in Quichua is used to build adverbal phrases and to mark emphasis. Spanish nouns (e.g. \text{bulla} ‘noise’ > \text{bulla-bulla} ‘noisily’) and adjectives (e.g. \text{bajo} ‘low’ > \text{baju-baju} ‘slowly’) occur frequently in the corpus.

10.1.2 Paraguayan Guarani

The process of morpho-phonological adaptation of Spanish loanwords in Guarani is determined by the higher levels of bilingualism of Guarani speakers. It is generally assumed that coordinate bilinguals show less phonological accommodation than subordinate or incipient bilinguals. The integration of Spanish loanwords to Guarani is determined also by the level of literacy of the speaker. This factor shows a different correlation however: literate speakers, who usually know a larger Guarani vocabulary in semantic fields related to modern culture and society, are expected to produce fewer loanwords than illiterate speakers, who lack such vocabulary and make use of Spanish items instead. This explains the seemingly contradictory observation made by Gregores and Suárez (1967) that it was “in the speech of the more imperfect bilinguals (as J.A) that Spanish borrowings occurred more frequently; in more educated speakers, such as L. de Á, P.A, and even V.S., all of whom spoke Spanish well, borrowings were much less common; in the speech of

\footnote{Originally, Spanish ‘bulla’ means both ‘crowd’ and ‘screaming’. The Spanish loanword reinforces the idea of a group of people who came and made noise.}
E.S. they did not occur at all” (Gregores and Suárez 1967: 29). Those speakers who use larger numbers of Spanish loanwords show more non-Guarani sounds (i.e. loanwords were not phonologically integrated) whereas those speakers whose Guarani is less Hispanicized usually adapt the few loanwords of their speech to Guarani phonology. Gregores and Suarez suggest a correlation between rural Guarani and a lower occurrence of loanwords. It is not clear, however, whether they draw the same correlation between a lesser occurrence of loanwords and literacy levels. Because literacy levels in urban and rural areas in Paraguay do not differ much from each other thanks to the implementation of bilingual education programs all over the country, the literacy factor may play a secondary role in the phonological adaptation of Spanish loanwords in Guarani, if compared to the role of bilingualism. Whatever the case may be, Spanish loanwords abound in colloquial Guarani and occur with or without phonological adaptation. The following description of how Spanish loans are adapted to Guarani phonology is based on my own observations and those of Gregores and Suarez (1967: 88-93).

The phonological adaptation of Spanish loanwords in Paraguayan Guarani involves the following mechanisms: (1) shift of stress, (2) nasalization of segments, and above all, (3) consonant changes. Spanish vowels remain largely unaffected, except for diphthongs.

1) **Shift of stress.** While loanwords preserving the stress pattern of Spanish are numerous, a large number of loanwords shift their original stress to the last syllable: e.g. Sp. *caballo* ‘horse’ [kabállo] > [kavyú]; Sp. *azúcar* ‘sugar’ [asúkár] > [asuká]. Other phonetic processes (e.g. drop of final consonants) usually accompany this shift. A stress-related phenomenon is the drop of the post-tonic syllable, without changes in the original stress pattern (Gregores and Suárez 1967: 91): e.g. *almohada* ‘pillow’ [almoáda] > [armoxá].

2) **Nasalization.** Two related mechanisms of adaptation concern nasalization. Vowels are nasalized when preceded or followed by a nasal segment such as [n], [m] or [ŋ]: e.g. Sp. *ajeno* ‘another’s’ [axéno] > [axénō]; Sp. *sában* ‘blanket’ [sábanå] > [savānå]. Nasal environments need not be immediate for nasalization to spread: e.g. Sp. *maldad* ‘wickedness’ [mal dádå] > [maʔerå]. Some words ending in /u/ drop this segment and nasalize the vocalic nucleus of the last syllable. Only word-final syllables are affected: e.g. Sp. *melón* ‘melon’ [melon] > [merō]; *pelón* ‘bald’ [pelōn] > [perō]. In a few cases the dropped consonant is not a nasal segment but a sibilant in nasal environment. Still, the result is a nasalized vocalic nucleus: e.g. *en vez* ‘instead’ [embsē] > [emē].

3) **Consonant changes.** The major phonological adaptations of Spanish loanwords in Guarani involve consonants.
a. Voiceless plosives ([p], [t], [k]) are normally preserved in loanwords: e.g. Sp. zapato ‘shoe’ [sapáto] > [sapatú]; vaca ‘cow’ [báka] > [baká]; Sp. atender ‘to pay attention to’ [atendér] > [atendé].

b. Voiced plosives ([b], [d], [g]) remain unchanged or otherwise modify their manner of articulation depending on environment, stress and position in the syllable (coda or onset).

i. The voiced bilabial stop [b] is preserved (see vaca ‘cow’, above) or otherwise nasalized to [m]: e.g. boričo ‘donkey’ [boriko] > [moriká]. The heterosyllabic cluster [mb] as found in Spanish en vez ‘instead’ is homosyllabic and may be nasalized as in [emě]. If followed by close back rounded [u], /bl/ becomes a voiced rounded velar [ɣ]: e.g. abuelo ‘grandfather’ [aɣelö]. Similarly, /bl/ is prenasalized in onset position of word-initial syllable: e.g. bromista ‘funny’ [bromista] > [bromista]. Because the same phenomenon is reported for Paraguayan Spanish (cf. 5.3.1), convergence between both languages is a good explanation. The last change involves the realization of /bl/ as the fricative labiodental [v]: e.g. bicho ‘bug’ [bičo] > [vičo]. The non-phonemic occurrence of [b] in Guaraní motivates this change.

ii. The voiced alveolar [d] is replaced with the flap [t] in certain words: e.g. almidón ‘starch’ [almidón] > [aramiɾo]. The heterosyllabic cluster [nd] is simplified to [n] (e.g. entender ‘to understand’ [entender] > [nantenéi] ‘I do not understand’). Further evidence of this simplification was found by Gregores and Suárez (1967: 89).

iii. The voiced and voiceless velars [g] and [k] are replaced with the close central unrounded vowel [i] in homosyllabic and heterosyllabic clusters: e.g. agringado ‘gringo-like’ [agringado] > [airingado]; doctor ‘doctor’ [doitor]; consigna ‘watchword’ [konsigna] > [kosñina]. Because the same replacement is observed in Paraguayan Spanish, it should be interpreted as a convergence feature.

c. The voiceless fricative labiodental /f/ is replaced with [p] in old loanwords: e.g. alfíler ‘pin’ [alfíler] > [araríɾé]. In a few loanwords /f/ is voiced as [v]: e.g. faltar ‘to lack’ [faltár] > [vatá].

d. The voiceless affricate alveopalatal [č] is fricativized as [ʃ] in all positions: e.g. chica ‘girl’ [čika] > [šika]; chicharrón ‘roast pork’ [čiʃarón] > [šiʃarón]. Also, the voiceless fricative replaces the fricative velar [x] in the word oveja ‘sheep’ [obeja] > [obeʃá]. This loanword entered Guaraní when /ʃ/ was still

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4 This change is reported for many rural dialects of Spanish in South and Central America (Gregores and Suárez 1967: 89) and therefore cannot be fully ascribed as a Guaraní-specific adaptation.
a distinct phoneme in Spanish (ca. XVI), hence the occurrence of the
voiceless fricative.\(^5\)

e. The voiceless alveolar fricative /s/ is not adapted in word-initial and
intervocalic positions: e.g. *mesa* ‘table’ [mesa] > [mesa]. However, if the
sound occurs in coda position in word-final syllables, it is realized as a
glottal fricative [h] or simply dropped: e.g. *asistir* ‘attend’ [asistir] > [asiht];
e.g. *capataz* ‘overlord’ [kapatás] > [kapatá]. Because this phonetic change is
attested in Paraguayan Spanish and other dialectal areas, including nearby
Rio de la Plata, it is a result of convergence.

f. The nasal segments [m], [n] and [ŋ] remain largely unchanged. In a few
cases they are dropped in coda position of word-final syllables. As a result,
the vowel of the affected syllable is nasalized (cf. *supra*). Otherwise, nasal
segments nasalize adjacent syllables: e.g. *manejar* ‘drive’ [manexar] >
[manexa].

g. While the flap [ɾ] remains unchanged in loanwords (e.g. *pero* ‘but’ [pero]),
the trill [r] is usually realized as a flap (e.g. *corral* ‘stockyard’ [koral] >
[koral].

h. The palatal lateral approximant /ʃ/ is replaced by the palatal fricative, e.g. /ʃ/
caballo ‘horse’ [kabalo] > [kavajú]; dropped along with shift of stress, e.g.
morcilla ‘blood sausage’ [morsía] > [musía]; or dropped with unchanged
stress e.g. *cebolla* ‘onion’ [sebóia] > [sevói]. Of these changes, only the last
two are phonetic adaptations, properly speaking. Interestingly, the palatal
fricative /ʃ/ as it occurs in certain loanwords contrasts with the fricative
alveolar /ʃ/ of Paraguayan Spanish (e.g. [kabáso]). This explains why
Gregores and Suárez found in their corpus only one example of the palatal
fricative /ʃ/ apart from [kavajú]. Such example involves a diphthong with /e/: i.e. *hielo* ‘ice’ [jelo].

i. The lateral alveolar /l/ remains unchanged, except for a few loanwords in
which the lateral is realized as a flap: e.g. *alfiler* ‘pin’ [alfilér] > [arapiré].
Because this sound is not native, Spanish loanwords with the lateral alveolar
should be considered unassimilated items. Still, there are a few words with
the lateral alveolar whose origin is neither Spanish nor Guaraní. This led
Gregores and Suárez (1967) to suggest an alternative non-Spanish origin for
this sound.

j. Consonant clusters are occasionally simplified in loanwords. This adaptation
is typical in old loanwords. In general, consonant clusters are maintained,
with a few exceptions attributable to idiolectal variation. Gregores and

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\(^5\) The fricative sibilant changed into the fricative velar in the seventeenth century. Thus, an
adaptation cannot be assumed in this case. The same sound occurs in Old Spanish loanwords
in Otomi (cf. *infra*).
Suárez (1967: 90) identify two types of simplification: the insertion of a vowel between consonants, as in cruz ‘cross’ [krus] > [kurusu]; the drop of a consonant in the cluster, as in bolsa ‘sack’ [bôlsa] > [vosá].

k. The insertion of the glottal stop at the beginning of a stressed monophonemic syllable in word-initial position: e.g. isla ‘island’ [ísla] > [?]íla]; hora ‘hour’ [óra] > [?óra]. Less noticeable than other phenomena involving consonants, this type of insertion is widespread not only in Paraguayan Guaraní but also in the Spanish of subordinate bilingual speakers.

4) Vowel change. The adaptive changes experienced by Spanish vowels are few if compared to consonants and affect mainly diphthongs.

a. Spanish vowels in loanwords do not change their value. The only known exceptions are: (1) nasalized vowels resulting from the drop of nasal segments; (2) the raising of /o/ to /u/ in old loanwords: i.e. zapato ‘shoe’ [sapatõ] > [sapatû]; borracha ‘donkey’ [boõika] > [muõika].

b. According to Gregores and Suárez (1967), “all the vowel sequences of Spanish loanwords have been adapted in agreement with the nondiphthongal characteristics of Guaraní. Therefore, Spanish diphthongs are always represented in Guaraní by non-diphthongal sequences” (Gregores and Suárez 1967: 90). This phonetic adaptation is illustrated by piola ‘cord’ [piõla] realized as [piõla], that is, the diphthong /io/ is separated by a glottal stop while the second vowel receives primary stress. De-diphthongization occurs across sociolects and idiolects of Guaraní but also in the Spanish of Guaraní-dominant bilinguals (see Chapter 5, Table 5.3).

Spanish loanwords are inserted directly without any derivation. Verbs are inserted after dropping the final /-r/. The base form of irregular loan verbs (those with vowel alternation in the root, e.g. sentir ‘to feel.INF’ > /sient-/) is the verb root in infinitive form. Once the infinitive ending is dropped, the loan verb receives the same verbal morphology as a native verb.7 In the following example the loan verb recoger ‘collect’ receives the prefix of third singular person (-o-), and the suffixes of emphasis (-paité) and obligation (va’reñ).
Adjectives and nouns are usually borrowed with gender markers. Some nouns are borrowed with their plural endings. Similarly, the *mente* ending occurs in several manner adverbs borrowed from Spanish. However, these bound forms occur only in loanwords and therefore are not used productively in the language.

Because frozen borrowing borders on codeswitching in Paraguayan Guarani, it is difficult to tell whether multi-morphemic constructions are frozen borrowings or code switches. The criteria introduced to distinguish borrowings from code switches include: (i) the phonological adaptation to the recipient language; (ii) the morphological and syntactic integration in the recipient language; (iii) the re-semanticization of foreign elements in the recipient language; (iv) the frequency of foreign elements across speakers; (v) the frequency of foreign elements by word classes across speakers. As regards these criteria, the following conclusions can be drawn about frozen borrowings in Paraguayan Guarani:

a. Single words with Spanish gender and plural morphemes should be considered lexical borrowings because these morphemes do not occur on native lexemes and co-occur with native forms (e.g. pseudo double marking) as illustrated in (18).

b. Complex constructions of two or more phonological words are of two types. The first type involves noun phrases composed of a noun head plus a determiner or modifier. An example is given in (19) in square brackets.

In the above example *alguno* ‘some’ modifies the loan noun *líder* ‘leader’. However, the form of the modifier does not correspond to the Spanish quantity adjective. Because *alguno líder* is ungrammatical in Spanish, it is not a code switch but a native clause with a loan noun modified by a loan quantifier. Consider the following examples:
20) [San Ignacio]-gua no-ți-ři ko tembiapo ndive
San Ignacio-ABL NEG-3.be-NEG DEM work with
‘People from San Ignacio do not work together’

21) nd-o-guereko-i-ha [la culpa]
NEG-3-have-NEG-RLTZ ART blame
‘He is not guilty’

The noun phrase in (20) is a Spanish toponym. These constructions are frozen borrowings because: neither of their constituents can be individually modified nor otherwise dislocated inside or outside phrasal boundaries; their intonation contours characterize them as single phonological words; their occurrence is more frequent across speakers than ad-hoc switched phrases; and, their semantic meaning is delimited by physical, social or other referents in the speaker’s sociocultural space. On the contrary, the noun phrase in (21) is a code switch because it occurs once in the corpus and calques the expression tener la culpa ‘to be guilty’. Other nouns phrases involve prepositions connecting nouns in head-modifier relation:

22) Oi-há-pe-guive o-je-gueraha preso padre-de-familia
3.be-RLTZ-LOC-ABL 3-PASS-take imprisoned parent-of-family
‘Since then parents of families were imprisoned’

The phrase is a code switch because it is not integrated morphologically or phonologically to Guaraní. Prepositions occur as well in the second type of complex constructions: prepositional phrases functioning as objects, complements and heads of predicate phrases.

23) nda-ha-e-i ko’ağa sekundária-pe
NEG-3.be-NEG nowadays high.school-LOC
IMP-PASS-require [to ART.PL student.PL]-ACC
‘Nowadays (teachers) do not require high-school students to do their job’

24) oñe-me’ê-va’eră [a los padres]
3-REFL-give-OBLG [to ART.PL parent.PL]
‘It will have to be given to the parents’

25) nda-i-de provecho-mo’ai chupe la Guaraní
NEG-3.be-useful-COND 3.ACC ART Guaraní
‘Guaraní wouldn’t be useful for him/her’
The bracketed phrases in (23) and (24) are headed by the Spanish preposition a marking animate direct objects and recipients. The phrases are different however: (23) shows the Guaraní accusative marker (-pe) while (24) does not. In these terms (23) is fully integrated to Guaraní morphosyntax and therefore a phrasal borrowing. By the same token, the lack of morphosyntactic integration of (24) makes it a good candidate for codeswitching. Still, there are a number of reasons to take into account: first, the noun phrase in (23) has Spanish bound morphology and shows gender and number agreement between constituents, like a code switch; second, neither phrase shows phonological adaptation; and third, both phrases result from syntactic calquing of equivalent Spanish expressions. In contrast, the phrase in (25) makes a clear case for borrowing: not only the prepositional phrase de provecho ‘useful’ is frozen as one phonological word, it is also adapted to Guaraní morphosyntax.

Admittedly, the issue of lexical borrowing in Paraguayan Guaraní is controversial. Except for single-word forms, which are straightforwardly identified as loanwords, it is not possible to establish before hand whether a complex construction is a code switch or a loan phrase, so that an individual analysis of each occurrence is necessary on the basis of several criteria for an informed decision about their nature.

10.1.3 Querétaro Otomí

Owing to the complexity of Otomí phonology and phonetics, the phonological adaptation of Spanish loanwords looks dazzling. Few would suspect a genetic relation between Otomí ndega and Spanish manteca, or between Otomí aste and Spanish aceite. The adaptation of loanwords is a regular, systematic process, the scope and regularity of which are determined to a great extent by the speaker’s degree of bilingualism. Hekking notices different levels of loanword integration among different speakers of Santiago Mexquititlán (Hekking 1995: 128). In explaining the variation of the process, Hekking finds a correlation between the phonological adaptation of Spanish loanwords, on the one hand, and factors such as schooling, migration and degree of literacy, on the other:

“Los Otomíes que no adaptan los préstamos españoles a la pronunciación Otomí son en primer lugar los que saben escribir el español, en segundo lugar los que saben leer dicha lengua, en tercer lugar los escolarizados y en cuarto lugar los migrantes.” [Those Otomí speakers who do not adapt Spanish loanwords to Otomí phonology are, first, those who know how to write in Spanish; second, those who know how to read in this language; third, those who have gone to school; fourth, those who are immigrants] (Hekking 1995: 194; my translation).
A further correlation is attested between loanword assimilation, on the one hand, and register and topic, on the other. Soustelle, for example, noticed that Otomí peasants talking to each other about topics associated with events of their own cultural environment (e.g. the harvest) in the socio-communicative space of their communities used to speak only in Otomí. In such case only a few loanwords occurred, all of them perfectly adapted to the native patterns of the language (Soustelle 1937: 259). On the other hand, Soustelle noticed a type of Otomí-Spanish bilingual speech plagued with unassimilated loanwords related to religion and material culture. Soustelle adds that most of these loanwords had native equivalents, many of which used in everyday speech. He concludes that the prolific use of loanwords from Spanish is determined in these contexts by the wrong idea that Otomí words cannot convey the same meanings as Spanish words. Interestingly, Soustelle and Hekking considered bilinguals the leaders of lexical change in the speech community, not only because they borrow Spanish items most frequently but also because they borrow them without assimilation to native patterns. The following description of loanword adaptation in Otomí is based on Hekking (1995) and Soustelle (1937).

The phonological changes to which Spanish loanwords are subject in Otomí are five:

1. **Nasalization.** Vowel [a] is nasalized as [ã] if the onset is a nasal consonant ([m], [n], [ŋ]). Vowels in onset position are occasionally nasalized after a glottal stop: e.g. *alba* ‘dawn’ [alba] > ['alba]. Sibilants in coda position are dropped with the resulting nasalization of the vocalic nucleus: e.g. *apenas* ‘just’ [apenas] > [apenã]. Sibilants and plosives in onsets in word-initial position are nasalized: e.g. *cinco* ‘five’ [sinko] > [nsinku]; *desde* ‘from’ [desde] > [n dezde].

2. **Syllable change.** The vocalic nucleus of unstressed syllables is dropped in word-initial and word-medial position: e.g. *arreglo* ‘arrangement’ [aregl0] > [reglo]; *bici cleta* ‘bike’ [biskleta] > [biskleta]; *aceite* ‘oil’ [aseyte] > [aste]. Consonant codas of stressed or unstressed syllables in word-final position, are dropped: e.g. *condición* ‘condition’ [kondisyon] > [kondsyo]. Vowel drop results in syllable reduction. Consonant drop results in syllable reduction. Consonant drop does not change the number of syllables but makes syllables open (CV). Non-Otomí consonant clusters are simplified in onset position or across syllable boundaries: e.g. *alcohol* ‘alcohol’ [alko:l] > [akol]; *octubre* ‘October’ [oktubre] > [otubre]. Alien consonant clusters inside or outside syllable boundaries are split by the tense close central unrounded vowel [i]: *hectárea* ‘hectare’ [ektarya] > [ekitaya].
3. Vowel change. The vocalic nucleus of unstressed syllables is generally replaced by the close central unrounded vowel [ɨ]: e.g. víspera ‘eve’ [bíspera] > [bispira]; caso ‘case’ [kaso] > [kasi]. Mid vowels in unstressed syllables are usually raised: e.g. vecino ‘neighbor’ [besino] > [bisinu]; tomín ‘small portion’ [tomín] > [dumí]. Soustelle also reports the inverse process, i.e. the lowering of high vowels, due to overcorrection in incipient bilinguals; e.g. durazno ‘peach’ [durasno] > [dorasno]. Spanish diphthongs are simplified after consonants [d], [f], [m], and [k]: e.g. cuerpo ‘body’ [kwerpo] > [korpo]; aunque ‘though’ [awnke] > [anke]; siquiera ‘at least’ [sikyera] > [sykera]. The simplified vocalic nucleus may have the same value of one of the vowels of the former diphthong and be subject to further raising or lowering.

4. Consonant change: The voiceless velar fricative [x] becomes a glottal fricative [h]: e.g. bruja ‘witch’ [bruja] > [bruha]; mejor ‘better’ [mexor] > [mehor]. The voiceless stops [p], [t], [k] become voiced: peso ‘weight’ [peso] > [beso]; vaca ‘cow’ [baka] > [baga]; cinta ‘ribbon’ [sinta] > [sinda]. The voicing of voiceless stops is restricted to old loanwords (Hekking 1995: 128). Sibilant [s] in onsets or intervocalic position is palatalized [ʃ]: mesa ‘table’ [mesa] > [meʃa]; sebo ‘fat’ [sebo] > [ʃebo].

The above changes occur in Querétaro Otomí but also in the dialect of San José del Sitio (Mexico State) studied by Soustelle. Other changes are reported for the latter dialect but not for Querétaro Otomí. These include: 1) /dI/ > /t/, e.g. Rosario ‘rosary’ [rosario] > [dosario]; 2) /t/ > /d/, e.g. azadón ‘shovel’ [asadón] > [asaro]; 3) the addition of vowel [e] to syllables ending in [I] to form a new syllable with the added vowel in the nucleus, e.g. angel ‘angel’ [ánxel] > [ánxele]; 4) the replacement of the consonant cluster /dl/ in intervocalic position with /-dn-/ or /-gr-/; e.g. Pedro [pedro] > [pednu] or [pegru]. Soustelle adds that stress in Spanish loanwords tends to shift to the last syllable, as in hacienda ‘estate’, pronounced [asendá]. Primary stress remains unchanged in most loanwords in the Otomí corpus, even if syllables are dropped as a result of the aforementioned changes (Hekking p.c.). While there are no additional changes in the integration of Spanish loanwords, idiosyncrasies are observed according to their lexical class.

1. Nouns. Spanish nouns are borrowed in singular along with gender markers (masculine -o, feminine -a), as illustrated by Hekking (1995: 109):

26)  Nu mtxi=familya  ‘ne  ‘wegi  ‘ne
      DEM 1POSS.DIM=family:F also  sew  also
Verbs. Spanish loan verbs are inserted directly in Otomi. They do not require a pro-verb form (do-type) like loan verbs in Popolocan (Wichmann 1996: 79) or a loan-verb affix like loan verbs in Nahuatl (Wichmann and Wohlgemuth, forthcoming). The insertion process consists in isolating the verb root followed by the thematic vowels /-a-/ and /-e-/ (Hekking 1995: 113). Loan verbs with the thematic vowel /-i-/ are followed by /-e-/ instead of /-i-/. One of the few exceptions is *kumpli*- (< cumplir) ‘comply with’. Additional changes in the verb root involve the occasional simplification of Spanish diphthongs. Spanish loan verbs receive the same morphology as native verbs. Example (27) illustrates a loan verb in context.

27) M-tada-gö    xi=regala-gi-tho-gö
    POSS.1-father-EMPH.1 PRF.3=give-away-DO.1-LIM-EMPH.1
    ‘My father only gave it away to me’

Adjectives. Spanish adjectives are comparatively underrepresented in the corpus (cf. section 10.3). According to Hekking (1995: 123) all loan adjectives in Otomi occur in masculine singular form; the only adjective in feminine form is *bib-a* (< viva) ‘smart.FEM’ opposed to *bib-o* (< vivo) ‘smart-MASC’. Notice that Quichua and Guarani borrow Spanish nouns and adjectives along with their gender markers. It is likely that gender markers on adjectives are peripheral to word structure and therefore more salient than gender markers on nouns. The outcome is that borrowers can parse gender markers on adjectives and restrict their borrowing. Examples (28) and (29) illustrate the loan adjectives *bib*a ‘smart.FEM’ and *riko* ‘rich.MASC’.

28) näʾ=är    nxtusi  näʾää
    DEM.DIST.S3=DEF.S girl DEM.DIST.S3

8 Vowels /-a-/ and /-e-/ correspond to the third-person present verbal endings while /-i-/ is the product of the raising of /-e-/. This hypothesis is corroborated by the fact that loan verbs changing their root vowel /e/ into /i/ when conjugated, are borrowed in Otomi only with the latter vowel (Hekking 1995: 115).
‘ñen-wi-’ä ar na biba
play-DUAL-DIST.S3 AdjPd SUP smart
‘The girl she is playing with is very smart’

29) di=pö ja denda ha o nuva riko
PRS.1=sell LOC shop where be DEM.PROX.PL.3 rich
mbahö to hä bojä...
Mestizo who have money
‘I sell at the shop where there are rich Mestizo people with money’

4. Adverbs. Loan adverbs are inserted directly in Otomí, although they are subject to phonological adaptation as well: e.g. kasg (< casi) ‘almost’; sikera (< sikiera) ‘at least’. Complex adverbial expressions involving a preposition plus a noun are borrowed as single units through the freezing of the original components in one phonological word or the deletion of one component (usually the first one, if unstressed): e.g. de repente ‘suddenly’ becomes pente (30).

30) Pente ar=ndähi bi=ndu bi=jwihni
Suddenly DEF.S=wind PST.3=begin PST.3=blow
nts'edi j=ar 'rani
strongly LOC=DEF.S bridge
‘Suddenly the wind began to blow strongly over the bridge’

Spanish manner adverbs with the -mente suffix are also inserted directly: e.g. principalmente ‘mainly’; solamente ‘only’, últimamente ‘lately’. To explain the occurrence of these adverbial forms, Hekking quotes Hill and Hill (1986: 374), for whom the presence of mente adverbs is not only conceptually but also pragmatically motivated as a means to call the interlocutor’s attention. The fact that mente adverbs do not show phonological adaptation (e.g. syllable shortening) support this hypothesis. However, it may occurs as well that incipient bilinguals do not recognize the adverbial ending as a detachable part of the word. The following sentence contains a mente adverb in emphatic position:

31) Mñentra ke ya=’ngho ya=’bghñä mi=pa
While that DEF.PL=gentleman DEF.PL=lady IMPF.3=go
j=ar tai pa nda ntä i obviamente
LOC=DEF.S fair for FUT.3 buy and obviously
nda=tsi ya=serbesa, sei ko yä=mbane
FUT.3=drink DEF.PL=beer pulque with POSS.3.PL=godfather
yä=son POSS.3.PL=son-in-law’s parent and POSS.3.PL=friend
Meanwhile the ladies and the gentlemen went to the fair to do their shopping and, obviously, to drink beers and pulque with their godparents, in-laws and friends.

Other cases of single words with bound morphemes are nouns with plural endings (e.g. kargero-s, porter-PL) or diminutive markers (e.g. pastor-sita, ‘shepherd-DIM’) and verbs with participial endings (e.g. us-adon ‘use-PTCP’) or tense markers (e.g. nkamby-o-byə ‘change-PST.3-PRS). Except for the last example,9 the others do not show phonological integration to Otomí. Nevertheless, Hekking notes that “it is not always easy to apply the criterion of phonological adaptation because one often finds late loanwords that are not adapted yet to Otomí phonology” (Hekking 1995: 130; my translation). Other frozen constructions include noun phrases, verb phrases, adverbial phrases, conjunctional phrases, and phrasal discourse markers. Noun phrases are the most frequent and include toponyms, proper names, religious festivals, titles of prayers and songs. Here are some examples.

32) ...ger barro primero’ä
NPd-DEF.S neighborhood first-EMP-S3
‘That is the Neighborhood-One’

33) Honda (mde...) medya ektarya
Just (half) half hectare
‘Only half of a hectare’

These phrases indicate concepts or entities belonging to the Mestizo society and culture for which no direct equivalence exists in Otomí. Because the phrases have a fixed structure that excludes dislocation but allows modification of the whole chunk, they are loan phrases representing the co-occurrence of lexical items. In similar terms, Hekking considers these nouns phrases complex borrowings. Nevertheless, the fact that noun phrases can be easily detached from discourse and used as code-switches requires an individual analysis of each case to support a borrowing or codeswitching interpretation.

9 This example can be classified as a matrix-language island. See above for a similar example in Quichua.
10.2 Linguistic borrowing in the corpora

Table 10.1 shows the overall number of borrowings in each language, i.e. including lexical and grammatical items. ‘Source’ stands for Spanish and ‘target’ for Quichua, Guaraní and Otomí. The number of informants is mentioned for each language.

<table>
<thead>
<tr>
<th>Source</th>
<th>Quichua (EQ) N=25</th>
<th>Guarani (PG) N=38</th>
<th>Otomi (O)N=59</th>
</tr>
</thead>
<tbody>
<tr>
<td>Target</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>15098 (18.9%)</td>
<td>10056 (17.4%)</td>
<td>15571 (14.1%)</td>
</tr>
<tr>
<td></td>
<td>64620 (81.1%)</td>
<td>47772 (82.6%)</td>
<td>94970 (85.9%)</td>
</tr>
<tr>
<td></td>
<td>79718 (100%)</td>
<td>57828 (100%)</td>
<td>110541 (100%)</td>
</tr>
</tbody>
</table>

Differences among the three languages are small. The distance between Quichua and Guarani – both typologically similar – is only 1.5%. The distance between Quichua, the language with the largest number of borrowings, and Otomí, the language with the smallest number, is 4.8%. Differences proved significant at a 0.5% level on a chi-square test. This suggests that the range between the highest and the lowest percentage represent clear tendencies in borrowing. However, linking the above figures to the contact situations of each recipient language produces somewhat contradictory results. On the one hand, the higher levels of bilingualism among Guarani speakers lead to expect an equally higher degree of borrowing from Spanish, while the medium levels shown by Quichua speakers lead to expect medium degrees of borrowing. Yet, Guarani and Quichua percentages are closely similar. On the other hand, the borrowing data of Otomí correspond to the lower levels of bilingualism of its speakers in the context of language shift.

The comparatively low contribution of linguistic borrowing to Paraguayan Guarani does not mirror the extent of contact with Spanish. In fact, Guarani-Spanish contact has been so long and intense that a number of mixed lects (hispanicized Guarani, Guaranícized Spanish) have emerged. Therefore, it is necessary to consider another type of language mixing: codeswitching.

The contributions of linguistic borrowing and codeswitching are different in each language. Compare the totals of linguistic borrowing in Table 10.1 with the totals of codeswitching in Table 10.2, which indicates the contribution of codeswitching according to number of switches, average length, tokens per switch and percentages of the corpus.
Table 10.2  Totals of codeswitching per number of switches and tokens

<table>
<thead>
<tr>
<th></th>
<th>Quichua (EQ)</th>
<th>Guaraní (PG)</th>
<th>Otomí (O)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Code switches</td>
<td>736</td>
<td>2103</td>
<td>110</td>
</tr>
<tr>
<td>Length in tokens</td>
<td>3.5</td>
<td>4.7</td>
<td>15.6</td>
</tr>
<tr>
<td>Tokens (%)</td>
<td>2767</td>
<td>10559</td>
<td>1717</td>
</tr>
<tr>
<td>Percentage of corpus</td>
<td>3.4%</td>
<td>18%</td>
<td>1.5%</td>
</tr>
</tbody>
</table>

The contribution of codeswitching in Paraguayan Guaraní is by far the largest: three times more than in Quichua and twenty times more than in Otomí. Also, Paraguayan Guaraní shows four and six times more switched tokens than Quichua and Otomí. In all, the contribution of codeswitching represent about one fifth of the Guaraní corpus, but only five percent of the Quichua and Otomí corpora as a whole.

The data demonstrate that the composition of language mixing is different across languages. Such composition is not related to typology, because typologically similar languages (Quichua and Guaraní) show completely different distributions of borrowing and codeswitching. At the same time, typologically different languages (Quichua and Otomí) prefer borrowing to codeswitching. To judge from a comparison of the absolute amounts of loanwords and code switches, linguistic borrowing in Paraguayan Guaraní is on equal grounds with codeswitching. Given that codeswitching requires from the speaker proficiency in both languages, it is clear why Guaraní speakers prefer this type of mixing to borrowing. On the contrary, Quichua and Otomí speakers prefer borrowing because their bilingual performance is smaller.

The preference for codeswitching in Paraguay is not an overnight development, although it has grown lately as a result of increasing levels of bilingualism. Rubin (1973: 127) noticed a clear correlation between higher levels of bilingualism and higher degrees of codeswitching. This correlation provides a different insight into the data. While Paraguayan Guaraní seems to be a rather conservative language in terms of Spanish borrowing, the language is actually the most innovative not only in terms of codeswitching but also in the use of both mixing strategies. It is this entrenched combination of codeswitching and borrowing what motivated Melià (1973; 1978) to characterize Paraguayan Guaraní as a third language different from Spanish and Guaraní. Elsewhere (Gómez Rendón, forthcoming/a) I analyze the co-existence of codeswitching and borrowing in Paraguayan Guaraní in the frame of the matrix language model.

A comparison of minimum and maximum percentages per speaker gives an accurate idea of the range of borrowing variation within each language. Table 10.3 contains both percentages plus averages of borrowing and standard deviations.
Table 10.3 Minimum and maximum percentages of borrowings for speakers

<table>
<thead>
<tr>
<th></th>
<th>Quichua (EQ)</th>
<th>Guaraní (PG)</th>
<th>Otomí (O)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum (speaker)</td>
<td>4.0%</td>
<td>5.7%</td>
<td>6.7%</td>
</tr>
<tr>
<td>Maximum (speaker)</td>
<td>27.0%</td>
<td>28.5%</td>
<td>26.0%</td>
</tr>
<tr>
<td>Mean</td>
<td>18.9%</td>
<td>17.4%</td>
<td>14.1%</td>
</tr>
<tr>
<td>SD</td>
<td>8.92</td>
<td>6.42</td>
<td>3.97</td>
</tr>
</tbody>
</table>

The borrowing behavior of speakers shows a wide range of variation in each language. The standard deviations demonstrate that Otomí speakers are highly uniform in their borrowing behavior (3.97%) while Quichua speakers are the most heterogeneous. In sum, borrowing tendencies are similar across the three languages but differ across speakers. Similar tendencies in borrowing are explained by the pressure exerted on the speech communities by the dominant language. Different borrowing behaviors are explained sociolinguistic factors such as age, gender, education, literacy and bilingualism. Table 10.4 shows the distribution of borrowing across varieties of the three languages.

Table 10.4 Borrowing percentages for dialects of each recipient language

<table>
<thead>
<tr>
<th></th>
<th>Quichua (EQ)</th>
<th>Guaraní (PG)</th>
<th>Otomí (O)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Imbabura</td>
<td>21.28%</td>
<td>17.69%</td>
<td>12.5%</td>
</tr>
<tr>
<td>Bolivar</td>
<td>11.67%</td>
<td>16.77%</td>
<td>16.0%</td>
</tr>
</tbody>
</table>

The widest range of variation across dialects is found in Quichua, with ten points of difference between both dialects. Less significant is the range between Santiago Otomí and Tolimán Otomí. Finally, the variation between the Guaraní sociolecčs is the smallest of all. Notice that the widest range of cross-dialectal variation (9.6% for Quichua) is still smaller than the narrowest range of cross-speaker variation (19.3% for Otomí). A comparison of the borrowing data per speaker and dialect of each language demonstrates that borrowing tendencies are more uniform across dialects than across speakers. In other words, variation in borrowing is influenced less by dialectal distribution than by sociolinguistic factors. Still, dialectal variation remains an influencing factor of borrowing. The percentages suggest that dialectal differences are decisively shaped by borrowing in Quichua, which is precisely expected from the relative distance between the dialects of Imbabura and Bolívar (section 4.4.3.1). It remains to be seen whether comparable differences are found in the distribution of loanwords according to parts of speech and syntactic use (cf. 10.5).

Once we have looked at the overall results of borrowing across languages and identified the ranges of variation for speakers and dialects, we shall inquire
specifically into the contribution of lexical borrowing and the tendencies observed cross-linguistically and language-specifically.

10.2.1 Lexical borrowing in the corpora

Lexical borrowing corresponds to major parts of speech, i.e. nouns, verbs, adjectives and manner adverbs. Borrowed items from other classes are categorized as grammatical. Table 10.5 gives the general percentages of lexical and grammatical borrowing in each language.

<table>
<thead>
<tr>
<th></th>
<th>Quichua (EQ)</th>
<th>Guaraní (PG)</th>
<th>Otomí (O)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Lexical</strong></td>
<td>81.2%</td>
<td>63.9%</td>
<td>47.5%</td>
</tr>
<tr>
<td><strong>Grammatical</strong></td>
<td>18.8%</td>
<td>36.1%</td>
<td>52.5%</td>
</tr>
</tbody>
</table>

The overall results of linguistic borrowing confirmed a close similarity across languages (Table 10.1). However, the tendencies in lexical and grammatical borrowings are strikingly different. The first tendency shows that the contribution of grammatical borrowing shows an increase inversely proportional to the decrease in lexical borrowing. Accordingly, Quichua has the highest percentage of lexical borrowing but the lowest of grammatical borrowing while Otomí has the highest percentage of grammatical borrowing but the lowest of lexical borrowing. The second tendency shows a gradual decrease between lexical and grammatical from Quichua to Otomí. The largest difference between lexical and grammatical borrowing is attested in Quichua (81% vs. 19%) and the smallest in Otomí (47% vs. 52%). Lexical borrowing is more frequent than grammatical borrowing in Quichua and Paraguayan Guaraní, thus confirming the prediction from the scales of borrowability (H.3). This prediction is not confirmed for Otomí, where grammatical borrowings slightly surpass lexical borrowings. Interestingly, the languages which confirm H.3 are similar to each other as regards their morphological type and their system of parts of speech. By the same token, subhypothesis H.3.1 on the precedence of open classes over closed classes in borrowing is demonstrated only for Quichua and Guaraní, where Spanish borrowings from open classes (i.e. verbs, nouns, adjectives and manner adverbs) are more numerous than borrowings from half-open or closed classes (function words).

The predominance of lexical borrowing cannot be established in absolute terms because distributions differ across languages. For an accurate assessment we must consider the number of tokens and types in lexical and grammatical classes (Table 10.6).
Table 10.6 Lexical and grammatical borrowing in terms of types and tokens

<table>
<thead>
<tr>
<th></th>
<th>Quichua (EQ)</th>
<th>Guaraní (PG)</th>
<th>Otomí (O)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Lexical</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tokens</td>
<td>12256 (81.2%)</td>
<td>6422 (63.9%)</td>
<td>7406 (47.5%)</td>
</tr>
<tr>
<td>Types</td>
<td>3188 (84.6%)</td>
<td>2159 (80.7%)</td>
<td>1431 (62.6%)</td>
</tr>
<tr>
<td><strong>Grammatical</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tokens</td>
<td>2842 (18.8%)</td>
<td>3634 (36.1%)</td>
<td>8165 (52.5%)</td>
</tr>
<tr>
<td>Types</td>
<td>580 (15.4%)</td>
<td>518 (19.3%)</td>
<td>853 (37.4%)</td>
</tr>
</tbody>
</table>

Differences between types and tokens in the distribution of lexical and grammatical borrowings are confirmed by the data. The distribution of types strengthens the dominance of lexical borrowing in Quichua and Guaraní but also in Otomí, where the proportion between lexical and grammatical items is inverted in relation to Table 10.5.

Differences between types and tokens are attributed to the morphological type of the languages. In addition, it is possible that the phonological variation of loanwords motivated by their idiosyncratic assimilation produces a larger number of loan types, especially in Otomí. Still, the major contribution of grammatical borrowing in tokens and types in this language cannot be satisfactorily explained by discursive or phonological factors only. The following step in the interpretation of the data is to determine the structure of lexical borrowing according to lexical classes.

10.3 Distribution of lexical borrowings in the corpora: parts of speech

This section compares the distributions of lexical borrowings according to verbs, nouns, adjectives and manner adverbs in the three languages under study. The findings presented in this section test the borrowing hypotheses from the scales of borrowability (H.3.1) and the theory of parts of speech (H.4 and related subhypotheses). After a general discussion of the overall results, individual subsections analyze the borrowings from each lexical class. The following table presents the percentages of loanwords from the four lexical classes in relation to overall borrowing.

Table 10.7a Percentages of borrowings per lexical class

<table>
<thead>
<tr>
<th></th>
<th>Tokens</th>
<th>Quichua (EQ)</th>
<th>Guaraní (PG)</th>
<th>Otomí (O)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nouns</td>
<td></td>
<td>54.4%</td>
<td>37.2%</td>
<td>40.7%</td>
</tr>
<tr>
<td>Verbs</td>
<td></td>
<td>17.7%</td>
<td>18.3%</td>
<td>4.8%</td>
</tr>
<tr>
<td>Adjectives</td>
<td></td>
<td>8.5%</td>
<td>7.4%</td>
<td>1.9%</td>
</tr>
<tr>
<td>Adverbs(^{10})</td>
<td></td>
<td>3.4%</td>
<td>2.4%</td>
<td>4.5%</td>
</tr>
<tr>
<td>Manner Adverbs</td>
<td></td>
<td>0.6%</td>
<td>0.9%</td>
<td>0.2%</td>
</tr>
</tbody>
</table>

\(^{10}\) This class includes all subclasses (manner, place, time).
These percentages confirm the prediction from the scales of borrowability (N > V > A > Adv) for Quichua and Guaraní but not for Otomí: in this language loan adverbs are more frequent than loan adjectives. Also, the general prediction from the theory of parts of speech (V > N > A > Adv) is confirmed only partially. Moreover, neither the average frequencies nor the language-specific percentages confirm the order predicted by the hierarchy of parts of speech. The actual distribution of nouns and verbs (N > V) is precisely the opposite to the predicted order (V > N). On average, nouns are over two times more frequent than verbs. The noun-verb ratio is the highest in Otomí, with over eight nouns for one verb. But is this distribution syntactically motivated? Are the regular syntactic functions in each language influencing the distribution of borrowings in lexical classes? In order to answer for this question, individual samples of 1000 tokens were extracted from the corpus of each language in order to know the regular distribution of lexemes over HP, MP, HR, MR functions as a benchmark for the analysis. The following table gives the percentages of lexical borrowings versus the regular distribution of syntactic functions (HR=head of referential phrase; HP=head of predicate phrase; MR=modifier of referential phrase; MP=modifier of predicate phrase).

**Table 10.7b. Lexical borrowings vs. regular distribution of syntactic functions**

<table>
<thead>
<tr>
<th>LexClass</th>
<th>SynFunc</th>
<th>LexClass</th>
<th>SynFunc</th>
<th>LexClass</th>
<th>SynFunc</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nouns</td>
<td>HR</td>
<td>67.6%</td>
<td>32.7%</td>
<td>59.1%</td>
<td>13.7%</td>
</tr>
<tr>
<td>Verbs</td>
<td>HP</td>
<td>22.0%</td>
<td>33.1%</td>
<td>29.1%</td>
<td>24.0%</td>
</tr>
<tr>
<td>Adjectives</td>
<td>MR</td>
<td>10.5%</td>
<td>6.1%</td>
<td>11.8%</td>
<td>2.4%</td>
</tr>
<tr>
<td>MannerAdverbs</td>
<td>MP</td>
<td>0.7%</td>
<td>13.6%</td>
<td>1.4%</td>
<td>5.2%</td>
</tr>
</tbody>
</table>

The following remarks are relevant concerning the distribution of regular syntactic functions as shown in Table 10.7b.

- Heads are higher than modifiers in the three languages, but the relative frequencies of syntactic functions vary in each language.
- On the one hand, only Otomí shows a higher frequency of heads of referential phrase. In the other languages, either heads of referential phrases are higher than heads of predicate phrases (Guaraní), or both functions are roughly similar (Quichua). Considering the preferential use of lexemes in predicative function in Guaraní, as described in Chapter 7, the higher frequency of heads of predicate phrases in this language is no surprise. However, the similarity of both functions in Quichua, a language without an extended predicational usage of lexemes, is surprising indeed.
- On the other hand, the function of modifier of referential phrase is higher than the function of modifier of predicate phrase only in Otomí; in Guaraní but especially in Quichua the latter function is clearly dominant over the other.
The low frequency of modifier functions in Otomí corresponds to its typological characterization as a type-6 rigid language. However, the higher frequency of predicate phrase modifiers in Quichua and Guaraní does not match the lack of a specialized class for this function in both languages, even though they do have a broad class of lexemes for this function, unlike Otomí, which lacks lexical means for the modification of predicate phrases.

Do the above particularities underlie the distribution of lexical borrowings? The first impression is that they do not: correspondences between both distributions are not significant. The following positive correlations were identified, although their degree of significance is extremely low: 1) the higher frequency of heads of referential phrase in Otomí is correlated vis-a-vis the higher frequency of loan nouns in the same language; 2) the higher frequency of heads of predicate phrases vis-a-vis the higher frequency of loan verbs in Guaraní in relation to Quichua and Otomí; and 3) the lower frequency of modifiers of predicate phrases in Otomí vis-a-vis the lower frequency of loan manner adverbs in the same language. However, for each of the above positive correlations, several negative ones were identified as well: 1) comparatively, the highest frequency of heads of referential phrases occurs in Quichua, but the frequency of loan nouns in this language is not the highest of the three; 2) the highest frequency of loan verbs occurs in Guaraní while the highest frequency of heads of predicate phrases is attested in Quichua; 3) the highest frequency of modifiers of predicate phrases occurs in Quichua but the highest frequency of loan manner adverbs is found in Guaraní.

In sum, the data do not show significant correlations between syntactic functions and lexical borrowings which can lead us to assume the former influence decisively on the latter. The corollary is that the distribution of borrowings per lexical class is not determined by the prototypical syntactic functions assigned to each class. Nevertheless, it remains to see if no correlation exists between the regular distribution of syntactic functions and the distribution of syntactic functions of those lexical classes which display a flexible behaviour (i.e. nouns and adjectives).

One further question to be answered is this: are the subhypotheses from the theory of parts of speech confirmed by the data? The percentages confirm subhypothesis H.4.1 for the three languages: phrase modifiers (A, Adv) are borrowed less frequently than phrase heads (V, N). The data equally confirm subhypothesis H.4.2 inasmuch as the three languages have borrowed items not only from the class of adverbs but also from all the previous lexical classes in the hierarchy. The corollary is that none of the languages shows a gap in the borrowing of lexical classes. Finally, the data confirm subhypothesis H.4.3 only for Guaraní and Quichua: loan nouns are the largest lexical class because they follow the last differentiated class in both languages, i.e. verbs. The data do not confirm the
subhypothesis for Otomí, in which adjectives should absorb the bulk of loanwords because they are the lexical class following the last differentiated class (nouns) in the Otomí system. Quite the opposite, loan adjectives in Otomí represent the smallest lexical class of all. Linguistic and nonlinguistic factors are at the heart of this phenomenon (cf. 10.3.3).

Differences in the borrowing of items of the four lexical classes are important across the three languages. While Quichua and Guaraní show pretty much the same distribution of borrowings per lexical class, Otomí deviates clearly from such distribution two ways: the primacy of nouns is overwhelming while the contribution of verbs is minimal. The similarities between Quichua and Guaraní may be due to their common flexibility in the system of parts of speech, as compared to the rigidity of lexical classes in Otomí. It is necessary, therefore, to explain the differences in the distribution of lexical classes across the languages from a cross-linguistic perspective.

10.3.1 Verbs

Verbs form an open class of lexical items occupying the slot of heads in predicate phrases. The occurrence of verbs in the corpora is predicted differentially by the theory of parts of speech (V > N) and the scales of borrowability (N > V). The data discussed in this section seem to confirm the latter prediction. The following table gives the totals of Spanish loan verbs, including types, tokens and their percentage of the overall borrowing.

<table>
<thead>
<tr>
<th>Loan verbs</th>
<th>Quichua (EQ)</th>
<th>Guaraní (PG)</th>
<th>Otomí (O)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tokens</td>
<td>17.7%</td>
<td>18.3%</td>
<td>4.80%</td>
</tr>
<tr>
<td>Types</td>
<td>15.9%</td>
<td>21.5%</td>
<td>10.3%</td>
</tr>
</tbody>
</table>

Verbs make a fairly equivalent contribution to overall borrowing in Quichua and Guaraní. In contrast, their contribution is much lower in Otomí. Guaraní shows the highest percentage of loan verbs, followed by Quichua and Otomí. The frequency of verbs in terms of types gives a similar picture. Guaraní has the largest number of different verb forms (21.5%), followed by Quichua (15.9%) and Otomí (10.3%). Interestingly, the contribution of types is twice as large as the contribution of tokens in Otomí due to phonological variation. In contrast, the percentages of types and tokens are closely similar in Quichua and Guaraní. If the number of types (distinct verb forms) determines the degree of borrowing innovation, then Guaraní is the most innovative of the three languages. If the number of tokens (all verb forms) measures the degree of borrowing productivity, then Quichua is the most productive of the
three languages for its prolific use of loan verbs in discourse. Let us consider the contribution of loan verbs to lexical borrowing (i.e. the four parts of speech).

### Table 10.9 Loan verbs from the total number of lexical borrowings

<table>
<thead>
<tr>
<th>Loan verbs</th>
<th>Quichua (EQ)</th>
<th>Guaraní (PG)</th>
<th>Otomí (O)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tokens</td>
<td>22.0%</td>
<td>29.1%</td>
<td>10.1%</td>
</tr>
</tbody>
</table>

The comparison of tables 10.8 and 10.9 demonstrates that the contribution of loan verbs to lexical borrowing is larger than their contribution to overall borrowing. The percentage of loan verbs in relation to the rest of lexical classes is higher for the three languages. This is particularly visible in Guaraní and Otomí. However, the relative positions of the languages in order of frequency remain identical.

It is useful to relate these findings to the systems of parts of speech of the recipient languages and the morphological type of the source language. On the one hand, it is noteworthy that the three languages have a separate lexical class for heads of predicate phrases. Therefore, it is expected that they show all similar tendencies in verb borrowing. The above statistics disprove this claim however. In addition, the predicative capacity of non-verbal classes in Guaraní cannot account for the large number of verb tokens and types in this language. On the other hand, the complex morphology of the Spanish verb and the fusional character of this language may be two inhibitors of verb borrowing in the three languages (cf. section 5.3). The influence of both structural factors becomes decisive when speakers are incipient bilinguals who cannot parse morphemes correctly and individualize verb roots for their morphosyntactic integration. While it is true that three languages do not have problems with the integration of Spanish verb forms (cf. 10.1), the influence of bilingual performance on morphological parsing could explain at least two facts of verb borrowing: the lesser occurrence of loan verbs in Otomí (incipient bilinguals); and the presence of a large number of loan verbs in Guaraní (compound and coordinate bilinguals).

A full account of verb borrowing calls for several factors, including not only the typology of parts of speech of the recipient language and the morphological type of the source language, but also the structure of discourse in both languages and the elements of the communicative setting. This will become clear when analyzing the usage of loan verbs.

### 10.3.2 Nouns

Nouns form an open class of lexical items occupying the slot of heads in referential phrases. Spanish nouns undergo various phonological processes of accommodation but find no impediment for their morphological insertion in the recipient languages. The occurrence of nouns is predicted differently by the theory of parts of speech (V
> N) and the scales of borrowability (N > V). The data discussed in this section validate the second distribution: nouns are the largest class of lexical borrowings in Quichua, Guaraní and Otomí. Still, the relative contribution of loan nouns varies across languages. Table 10.10 gives the totals of Spanish loan nouns, including types, tokens and their percentage of the overall borrowing.

**Table 10.10 Loan nouns from the total number of borrowings**

<table>
<thead>
<tr>
<th></th>
<th>Quichua (EQ)</th>
<th>Guaraní (PG)</th>
<th>Otomí (O)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loan nouns</td>
<td>Tokens 54.0%</td>
<td>Tokens 37.2%</td>
<td>Tokens 40.8%</td>
</tr>
<tr>
<td></td>
<td>Types 54.0%</td>
<td>Types 45.5%</td>
<td>Types 47.8%</td>
</tr>
</tbody>
</table>

Quichua is the language with the largest number of loan nouns, followed by Otomí and Guaraní. The same frequencies are attested for types. The percentages of nouns from the overall amount of borrowings rank the three languages on the following scale of frequency: Quichua > Otomí > Guaraní. This ranking is different from the one based on loan verbs (Guaraní > Quichua > Otomí). The contribution of loan nouns to lexical borrowing (the four parts of speech) is presented in Table 10.11.

**Table 10.11 Loan nouns from the total number of lexical borrowings**

<table>
<thead>
<tr>
<th></th>
<th>Quichua (EQ)</th>
<th>Guaraní (PG)</th>
<th>Otomí (O)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loan nouns</td>
<td>Tokens 67.6%</td>
<td>Tokens 59.1%</td>
<td>Tokens 85.9%</td>
</tr>
</tbody>
</table>

The comparison of tables 10.10 and 10.11 demonstrates that loan nouns make a larger part of lexical borrowing than they make of overall borrowing. The percentage of loan nouns in relation to the rest of lexical classes increases in the three languages, but it is especially visible in Otomí. As a result, the ranking of the languages changes notably: Otomí > Quichua > Guaraní. In the following I discuss the distribution of loan nouns from the perspectives of the systems of parts of speech of the recipient languages, their morphological type, and various pragmatic and discursive factors. Nonlinguistic situations that could speed up or slow down noun borrowing are considered too.

Of the three languages only Otomí has a distinct class of nouns. Quichua and Guaraní, both flexible languages, have a broader class of non-verbs which includes lexemes equivalent to nouns, adjectives and manner adverbs. Therefore, if the existence of a separate lexical class favors the borrowing of lexemes from the same class, the large number of loan nouns in Otomí is explained satisfactorily, but the even larger number of loan nouns in Quichua cannot be explained in this way. An alternative explanation for the large number of nouns in Quichua comes from subhypothesis H.4.3, according to which items from the lexical class following the last differentiated class attested in the recipient language are borrowed.
preferentially. Because verbs are the last differentiated class attested in Quichua, nouns are supposed to be borrowed preferentially. Yet, the explanation is invalidated by Otomi itself, because this language does not borrow adjectives preferentially, as expected from H.4.3.

As regards the typology of the source language, no factor seems to influence the contribution of loan nouns in any significant way. Spanish nominal morphology is simple in comparison to verbal morphology. Therefore, no structural obstacles to noun borrowing are expected, which may be interpreted positively as a factor promoting noun borrowing regardless of typological differences.

Situations in which nouns are surpassed by items from other classes, particularly verbs, are not uncommon in the literature. Nichols (2006) reports that nouns in Zuni (isolate, Southwestern United States) are borrowed only rarely and that their low frequency is explained in terms of grammatical factors such as restrictions on native nominal roots. Also, Epps (forthcoming) finds that Tukano loan verbs in Hup are more frequent than loan nouns, and explains this situation by the high levels of bilingualism among Hup speakers and the capacity of verbs to hide inside the complex Hup verb phrase. Only in this way, Epps concludes, a large number of verbs can enter the language despite social pressures against language mixing in the Hup speech community.

The factors proposed to account for the primacy of nouns in most borrowing situations can be summarized as follows:

a) Nouns are less morphologically complex (e.g. than verbs) and therefore especially borrowable.

b) The simplicity of nominal morphology prevents a typological mismatch between the morphosyntax of the donor language and the morphosyntax of the recipient language in noun borrowing.

c) Nouns are syntactically more independent than other lexical classes: they can stand alone in the phrase and do not rely on further arguments as verbs or adjectives do.

d) The syntactic independence of nouns makes them semantically autonomous so that they do not require further constituents to be conceptually complete.11

e) Nouns usually refer to entities in socio-communicative space of speakers which can be retrieved more easily than abstract referents as those encoded by adjectives (properties) or verbs (actions).

Contact situations are characterized by higher or lower degrees of acculturation of the speech communities involved. This acculturation implies the adoption of objects and practices alien to the social space of speakers before contact. In this context, the borrowing of form-meaning units referring to new entities is a helpful mechanism to

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11 The fact that nouns are always acquired by children before verbs points in the direction of nouns’ morphological simplicity and more straightforward referentiality
cater for the communicative gap created by the contact of two different sociocultural systems. Nouns are the best candidates for borrowing in these situations, because their referential capacity makes them easily retrievable from discourse and their identification with referents is facilitated by their syntactic independence and saliency in speech. This explains why the earliest borrowings from Amerindian languages in Spanish are nouns (cf. section 5.4.1). In the contact situations analyzed in this book, the need to bridge the communicative gap with the dominant Spanish-speaking culture leads Amerindian speakers to borrow an increasing number of nouns referring to objects and practices with which they enter into contact as a result of their participation in the mainstream society. Because of their ethno-cultural background, speakers of Quichua and Otomí use borrowing as a strategy of immersion in the dominant culture. The same pressure is not felt by Guaraní speakers because they are not members of an ethnic minority and their participation in the national society is more active thanks to their bilingualism.

These arguments suggest that the explanation of borrowing should include both linguistic and nonlinguistic factors. Indeed, an eclectic approach combining typological and sociolinguistic elements helps us elaborate a more adequate model of constraints on linguistic borrowing.

10.3.3 Adjectives

Adjectives form an open class of lexical items occupying the slot of modifiers in referential phrases. Like nouns and verbs, they undergo a phonological process of integration to the recipient language. The great majority of adjectives are inserted directly (without derivation) into the native structure, even though they can be used in syntactic positions other than the prototypical of modifier of referential phrase. The frequency of adjectives is equally predicted by the theory of parts of speech and the scales of borrowability: (N/V) > Adj > Adv. The distribution of loan adjectives in Quichua and Guaraní confirm their position. In contrast, loan adjectives in Otomí are less frequent than adverbs. Table 10.12 gives the totals of Spanish loan adjectives, including types, tokens and their percentages of overall borrowing.

<table>
<thead>
<tr>
<th>Loan adjectives</th>
<th>Quichua (EQ)</th>
<th>Guaraní (PG)</th>
<th>Otomí (O)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tokens</td>
<td>8.5%</td>
<td>7.4%</td>
<td>1.9%</td>
</tr>
<tr>
<td>Types</td>
<td>13.6%</td>
<td>11.9%</td>
<td>4.3%</td>
</tr>
</tbody>
</table>

While loan adjectives make a similar contribution in Quichua and Guaraní, their number in Otomí is minimal. The ranking of the three languages on adjective borrowing (Quichua > Guaraní > Otomí) differs from the ranking on nouns and
verbs. The contribution of loan adjectives from the total of lexical borrowings (the four parts of speech) is given in the following table.

<table>
<thead>
<tr>
<th>Loan adjectives</th>
<th>Quichua (EQ)</th>
<th>Guaraní (PG)</th>
<th>Otomí (O)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tokens</td>
<td>10.5%</td>
<td>11.8%</td>
<td>4.0%</td>
</tr>
</tbody>
</table>

Table 10.13 Loan adjectives from the total number of lexical borrowings

The percentage of loan adjectives relative to lexical borrowing differs from their percentage of overall borrowing. This time Guaraní and Quichua rank first and second while Otomí remains third even though the absolute increase of loan adjectives is over hundred percent.

Considering the parts of speech of the recipient languages, the main issue in need of explanation concerns the minimal contribution of loan adjectives in Otomí. In the following I discuss alternative explanations for this phenomenon.

To begin with, none of the three languages has a distinct class comparable to the class of Spanish adjectives. On the one hand, Quichua and Guaraní have a broader lexical class of non-verbs which covers the function of adjectives. On the other, Otomí has no lexical class for the syntactic function of referential phrase modifiers and uses compounding or stative verbs. The data disconfirm the prediction of hypothesis H.4.3 that Otomí will borrow adjectives more frequently because they follow the last differentiated class attested in the language. Quite the opposite, Otomí is the language with the smallest number of adjectives. This fact can be interpreted in two different ways: a) the lack of adjectives does not lead to their preferential borrowing; b) the lack of adjectives inhibits their borrowing. In my opinion, the question is not which of these interpretations is correct but what makes the lack of adjectives either a promoting factor or an inhibiting factor. Because the same factor may be interpreted in either sense, there should be another factor positioned higher up in the scale of causation (cf. section 2.6.2) which determines the direction of the former in the borrowing process. Accordingly, the interplay of linguistic and nonlinguistic factors is reinterpreted in the following terms: the extent of the influence exerted by typological factors is determined by bilingualism. If we assume that incipient bilinguals are more conservative of the typological profile of the recipient language, the lack of a lexical class in their language will inhibit the borrowing of loanwords from such class. On the contrary, if we assume that compound and coordinate bilinguals are more innovative and open the door to alien elements that eventually motivate structural changes, the lack of a lexical class in their language will promote the borrowing of loanwords from such class. This

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12 As regards the morphology of the source language, adjective borrowing is facilitated by the relative morphological simplicity of Spanish adjectives and the freezing of roots and gender morphemes as single units.
argument requires the consideration of loanword usage in the recipient language. If the recipient language uses loan adjectives as such and not as something else (e.g. verbs, nouns) a typological change is in progress. In other words, the correlation between bilingualism and typology implies the correlation between bilingual performance and usage of lexical borrowings. The statistical study of this correlation is undertaken in section 10.6.

Another explanation for the observed distribution of loan adjectives is purely typological and may be formulated in the following terms: the presence of a class of flexible lexical items (e.g. non-verbs or modifiers) motivates the borrowing of lexical items used in any of the syntactic positions occupied by such flexible items, while the lack of lexical mechanisms to perform syntactic functions, as typical of rigid languages, inhibits the borrowing of lexical items. In other words, the borrowing of lexical items from a class unattested in the recipient language is favored by the presence of a lexical class performing an equivalent function (e.g. non-verbs in Guaraní and Quichua) but disfavored by the absence of a similar class (e.g. the lack of adjectives in Otomí).

For Quichua and Guaraní, flexible languages, two promoting factors of adjective borrowing could be a) the occurrence of adjectives in bare noun phrases without explicit noun heads, and b) the existence of a small subclass of adjectives used as modifiers of referential and predicate phrases without further measures. To weigh the influence of these factors, we need to explore the usage of loan adjectives and their subclasses. For reasons of space only the first task will be undertaken here (cf. 10.4.3).

In sum, the overall percentages agree with the frequency distribution of loan adjectives predicted by the theory of parts of speech and the scales of borrowability. However, the low frequency of adjectives in Otomí contradicts the prediction of subhypothesis H.4.3. Because the predictions are confirmed for Guaraní and Quichua, we assumed other factors should be playing a role in adjective borrowing in Otomí. One of them is the level of bilingualism. Incipient bilinguals like the bulk of Otomí speakers tend to preserve the typological profile of their language by disallowing alien elements which do not conform to such profile (e.g. adjectives). Additional factors concern the occurrence of adjectives in bare noun phrases and the semantic classification of flexible adjectives.

10.3.4 Manner adverbs

Manner adverbs form an open class of lexical items occupying the slot of modifiers in predicate phrases. Spanish manner adverbs are directly inserted into the morphological structure of the recipient languages. Spanish manner adverbs are borrowed in derived and non-derived forms. If borrowed in derived form, manner adverbs are frozen borrowings with the derivative morpheme -mente. The theory of
parts of speech predicts the relative frequency of manner adverbs (\textit{Adj} > \textit{MAdv}). The scales of borrowability predict the relative frequency of adverbs in general (\textit{Adj} > \textit{Adv}). In both cases adverbs are the lexical class with the lowest borrowability. The percentages of adverbs in Table 10.7 confirm their position in Quichua and Guaraní but not in Otomí while the percentages of manner adverbs confirm the prediction from the theory of parts of speech in the three languages. The following table gives the totals of loan manner adverbs, including types, tokens and their percentage of overall borrowing.

### Table 10.14 Loan manner adverbs from the total number of borrowings

<table>
<thead>
<tr>
<th>Loan manner Adverbs</th>
<th>Quichua (EQ)</th>
<th>Guaraní (PG)</th>
<th>Otomí (O)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tokens</td>
<td>0.6%</td>
<td>0.9%</td>
<td>0.2%</td>
</tr>
<tr>
<td>Types</td>
<td>1.0%</td>
<td>1.7%</td>
<td>0.6%</td>
</tr>
</tbody>
</table>

The percentage of manner adverbs in the corpora is very small if compared to other lexical classes. The ranking of languages on loan manner adverbs (tokens) is Guaraní > Quichua > Otomí. In types the ranking is exactly the same. Also, notice that Otomí still ranks first in the borrowing other types of adverbs. Table 10.15 gives the percentages of loan manner adverbs to lexical borrowing (the four parts of speech) in the three languages.

### Table 10.15 Loan manner adverbs from the total number of lexical borrowings

<table>
<thead>
<tr>
<th>Loan manner adverbs</th>
<th>Quichua (EQ)</th>
<th>Guaraní (PG)</th>
<th>Otomí (O)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tokens</td>
<td>0.7%</td>
<td>1.4%</td>
<td>0.5%</td>
</tr>
</tbody>
</table>

The comparison of tables 10.14 and 10.15 demonstrates that the contribution of loan manner adverbs to lexical borrowing is larger that their contribution to overall borrowing in the three languages. Still, the ranking of the languages on verb borrowing remains identical: Guaraní > Quichua > Otomí.

Given their systems of parts of speech, none of the languages are expected to borrow manner adverbs with particular frequency: while Otomí has no lexical class of items for the modification of predicate phrases, Guaraní and Quichua have only a broad lexical class (non-verbs) for that purpose. Alternatively, Quichua and Guaraní could eventually borrow manner adverbs to the extent that they use a lexical strategy for the modification of predicate phrases. The statistics provide evidence for this hypothesis. Still, it remains to see if loan manner adverbs are used as a new lexical class in Otomí. If bilingualism is positively correlated to typological stability, the emergence of a new lexical class in this language is excluded, given the incipient
bilingualism of Otomí speakers. The usage of manner adverbs is analyzed in section 10.4.4 and their correlation to bilingual performance in section 10.6.

Finally, it is possible that the distribution of manner adverbs is partially determined by the preference of phrasal constructions in the source language for the modification of predicate phrases. For example, the manner adverb rápidamente ‘rapidly’ is usually replaced with adverbial phrases such as a la carrera, volando or a las voladas. While these phrases are characteristic of informal registers, they are replaced by their lexical equivalents in formal speech. Because our data involve colloquial speech in informal situations, phrasal adverbs are expected in the corpora. I discuss the distribution of phrasal manner adverbs in section 10.4.5.

10.3.5 Complex borrowings: frozen and phrasal

Complex borrowings are multi-morphemic loanwords containing either a root with bound morphemes of the source language, or free morphemes forming a single lexical unit. The first type is called ‘frozen borrowings’ and the second type ‘phrasal borrowings’\textsuperscript{13}. It is necessary to distinguish both types from code switches (cf. section 4.2.2). Here I analyze the contribution of complex borrowings in terms of frequency and syntactic function. Table 10.12 summarizes the contribution of complex borrowings in the corpora.

<table>
<thead>
<tr>
<th>Complex Borrowings</th>
<th>Quichua Tokens</th>
<th>Guaraní Tokens</th>
<th>Otomí Tokens</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>5.56%</td>
<td>5.13%</td>
<td>4.5%</td>
</tr>
<tr>
<td></td>
<td>10.97%</td>
<td>13.07%</td>
<td>16%</td>
</tr>
</tbody>
</table>

The contribution of complex borrowings is not unimportant. They occur more frequently than manner adverbs in the three languages, and more frequently than adjectives and verbs in Otomí. The presence of complex borrowings is still more relevant in a type analysis. At the same time, complex borrowings across the three languages are similar in tokens but less so in types. Still, the ranking of languages on this parameter is the same in both cases: Otomí > Guaraní > Quichua.

The unexpectedly large number of complex borrowings raises two problematic issues: one is their alternative analysis as code switches; another is the assignment of a lexical class to phrasal borrowings. The issue of the linguistic status of complex borrowings is briefly commented below on the basis of the discussion presented in

\textsuperscript{13} A crucial difference between both types of complex borrowings is that frozen borrowings can be assigned to a lexical class of the source language while phrasal borrowings cannot. Therefore, a comprehensive evaluation of complex borrowings requires an analysis of their syntactic roles in the recipient language (cf. section 10.4.5).
sections 4.2.2 and 10.1. The accountability of lexical items in terms of lexical classes is left for section 10.4.5.

In previous sections I proposed to analyze multi-word stretches either as instances of complex borrowing or cases of codeswitching depending on various. Arguably, there is a correlation between the frequency of complex borrowings and code switches, on the one hand, and levels of bilingualism, on the other. In this perspective, incipient bilinguals prefer phrasal borrowing while compound or coordinate bilinguals favor codeswitching. Nevertheless, a comparison of complex borrowings and code switches does not confirm such assumption. The language with the largest number of code switches is Guaraní (18%). Accordingly, it is expected that Guaraní shows only a small number of complex borrowings, but that is not case. In any case, the variation across languages in the number of complex borrowings is not significant enough to allow a reliable measure of the relation of complementary distribution between complex borrowings and code switches.

10.4. The use of lexical borrowings in the corpora

This section deals with the usage of Spanish loanwords in Guaraní, Quichua and Otomí. This usage is based on the idea of flexibility, differentiation and rigidity: thus, lexical flexibility consist in the use of one lexical class for two or more syntactic functions; differentiation, the use of one lexical class for one syntactic function; and rigidity, no lexical class for one syntactic function and its replacement with morphosyntactic mechanisms. According to the classification of previous chapters, Spanish is a language with a differentiated system of parts of speech; Guaraní and Quichua have a flexible system and Otomí a rigid system. On the basis of this classification I proposed a set of hypotheses concerning the frequency and use of Spanish loanwords in general and for each language. While the hypotheses concerning the frequency of loanwords were tested in the last sections, those about the usage of loanwords are played against the borrowing data in the following. For the sake of clarity, this section is subdivided in several subsections, each devoted to the analysis of one lexical class and the uses thereof in the recipient languages. Statistics are supported with examples from the corpora.

10.4.1 The use of loan verbs

The data rank loan verbs second in the borrowing hierarchy against the predictions from the theory of parts of speech. The distribution of loan verbs cannot be explained alone by the systems of parts of speech of the recipient languages or the morphological typology of the source language, and requires the consideration of discursive, pragmatic and sociolinguistic factors. Because Quichua, Guaraní and Otomí have a distinct lexical class of verbs, a univocal relation exists between this
lexical class and the syntactic slot of head of predicate phrase. This typological feature restricts the use of loan verbs in other slots, as shown by the syntactic distribution of loan verbs in the corpora. Table 10.17 charts the syntactic functions of head of predicate phrase (HP), head of referential phrase (HR), modifier of referential phrase (MR) and modifier of predicate phrase (MP).

Table 10.17 Distribution of loan verbs per syntactic slot

<table>
<thead>
<tr>
<th>Verbs</th>
<th>Quichua Tokens</th>
<th>Guaraní Tokens</th>
<th>Otomí Tokens</th>
<th>Total Tokens</th>
</tr>
</thead>
<tbody>
<tr>
<td>HP</td>
<td>2668</td>
<td>1842</td>
<td>725</td>
<td>5235</td>
</tr>
<tr>
<td>HR</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MR</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MP</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Verbs</th>
<th>Quichua Types</th>
<th>Guaraní Types</th>
<th>Otomí Types</th>
<th>Total Types</th>
</tr>
</thead>
<tbody>
<tr>
<td>HP</td>
<td>596</td>
<td>578</td>
<td>191</td>
<td>1365</td>
</tr>
<tr>
<td>HR</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MR</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MP</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Loan verbs are used always in their prototypical function of heads of predicate phrases (HP). No functional adaptation occurs because the donor language and the recipient languages have all one distinct class for the syntactic slot of heads of predicate phrase. No functional specialization occurs either, because Spanish verbs correspond to the same slot occupied by verbs in the recipient languages. The following examples illustrate the use of loan verbs (in bold) in Guaraní (34), Quichua (35) and Otomí (36).

34) *La tekove-kuéra o-heka pe hapichá-pe,*

DEM person-PL 3-loo.for DEM people-ACC

*i-katu-kuaa haguã-icha o-ño-ntende o-heka,*

3-be.able.to-know for-like 3-RECP-understand 3-look.for

‘People look for other people, so they can understand each other’

35) *Chai ña grupu-cuna-ta *forma-ri-shca cai presidinti

DEM already group-PL-ACC form-REF-PRF DEM president

alli-pacha shaya-ri-shpa-mi

good-SUP stand.up-GER-FOC

‘And then the current president stood up strong and created the groups’

36) *Nesesita da nuya jà’ui da=hüunta*

need FUT.3 DEM.PL person FUT.3=get-together

*pa da hoku ‘nar=mehe*

for FUT.3 build INDEF.S=well

‘These people need to get together in order to build a well’
37) chay tunel-ta rura-ngapa-ca
   DEM.DIST tunnel-ACC make-PURP-TOP
   ñucanchi pico-lha-mi minishti-ri-n
   1PL.POSS pick-just-FOC need-REFL-3PL

   ‘Our picks were needed to dig that tunnel’

   The verb roots –ntende ‘understand’, forma- ‘create’ and hñunta ‘get together’ occupy all the slot of heads of predicate phrases in their respective sentences. Notice that the Spanish verb form necesitá ‘need’ in (36) is not considered a loan verb proper but a loan auxiliary together with phrasal forms such as kreo-ke ‘I believe’ and tyene-ke ‘it has to’. Loan auxiliaries are a special category of grammatical borrowing and receive special attention in section 11.3.5.3. Neither Quichua nor Guaraní have an equivalent loan auxiliary. Quichua does have minishti- ‘to need’ (37), from Spanish menester ‘need’ in the periphrastic constructions es menester and haber menester ‘to be in need of’. The borrowing of this form dates back to the first years of contact, because these constructions have long fallen into disuse in colloquial Spanish and the form itself is fully assimilated to Quichua phonology.

   The only apparent exception to the predicative usage of loan verbs is represented by a small number of verb forms used as heads of referential phrases in Quichua. However, these cases are instances of nominalization, a derivational strategy to make noun phrases from verb phrases. Consider the following example:

   38) almozero ni-shca-cuna-man-pish tanda muti
      cook say-NMLZR-PL-DAT-ADIT bread boiled.corn
      carac carac chay servisio-ta rura-shca-cuna-man-pish
      give-HAB be-PST DIST service-ACC do-NMLZR-PL-DAT-ADIT
      carac carac servi-shca-cuna-ca almiza-ta rura-shca
      give-HAB be-PST serve-NMLZR-PL-TOP lunch-ACC make-PST

      ‘They used to give bread and boiled corn to the so-called almozero, they used to give them to those who did this job, and the maids prepared the lunch’

      The verb form servi- ‘serve, wait upon’ in (38) is derived into the noun ‘servers’ by the suffixation of the participle marker -shka. Similar constructions in (38) are almozero nishacuna ‘the so-called almozeras’ and servisiota ruraschacuna ‘the ones who do the service (of preparing lunch)’. Because the verb form can be used as a noun only through further measures (i.e. nominalization), it is not flexible. Accordingly, all the instances of nominalization were not included in the statistics.

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14 Auxiliaries are not included in Table 10.13, hence the mismatch with the total of loan verbs in Table 10.8.
In sum, Spanish loan verbs in the three recipient languages show a straightforward distribution: they are used as heads of predicate phrases without exception. The few cases of Spanish verbs in the corpora that occupy other syntactic slots (e.g. head of referential phrase) or still other functions (e.g. modality) do not contradict this distribution: they are instances of nominalization or loan auxiliaries.

10.4.2 The use of loan nouns

Nouns are the largest class of Spanish loanwords in the corpora. The contribution of nouns to overall and lexical borrowing was discussed in section 10.3.2 and explained through discursive, pragmatic, semantic and typological motivations. Here I look into the use of loan nouns and explain such use in terms of linguistic and nonlinguistic factors.

Of the three languages only Otomí has an individual class of lexical items for the syntactic function of heads of referential phrases. Instead, Guaraní and Quichua have a multi-functional class of items covering this syntactic function plus those of modifiers of predicate and referential phrases. The hypothesis of functional adaptation predicts that loan nouns will be used in the same way as native nouns, i.e. flexibly in Quichua and Guaraní, but differentially in Otomí. In contrast, the hypothesis of functional specialization predicts that loan nouns will be used as they are in Spanish, i.e. only in their prototypical function.

Table 10.18a charts the syntactic functions of heads and modifiers of predicate and referential phrases. Apart from these functions, several others occur marginally in the corpora and concern grammatical borrowing.

<table>
<thead>
<tr>
<th>SynFunc</th>
<th>Quichua</th>
<th>Guaraní</th>
<th>Otomí</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nouns</td>
<td>Tokens</td>
<td>Tokens</td>
<td>Tokens</td>
<td>Tokens</td>
</tr>
<tr>
<td>HP</td>
<td>5</td>
<td>8</td>
<td>37</td>
<td>103</td>
</tr>
<tr>
<td>HR</td>
<td>7618</td>
<td>3675</td>
<td>6275</td>
<td>17671</td>
</tr>
<tr>
<td>MR</td>
<td>392</td>
<td>54</td>
<td>7</td>
<td>453</td>
</tr>
<tr>
<td>MP</td>
<td>141</td>
<td>1</td>
<td></td>
<td>142</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Nouns</th>
<th>Types</th>
<th>Types</th>
<th>Types</th>
<th>Types</th>
</tr>
</thead>
<tbody>
<tr>
<td>HP</td>
<td>2</td>
<td>7</td>
<td>24</td>
<td>51</td>
</tr>
<tr>
<td>HR</td>
<td>1767</td>
<td>1214</td>
<td>880</td>
<td>3861</td>
</tr>
<tr>
<td>MR</td>
<td>215</td>
<td>37</td>
<td>3</td>
<td>255</td>
</tr>
<tr>
<td>MP</td>
<td>29</td>
<td>1</td>
<td></td>
<td>30</td>
</tr>
</tbody>
</table>

At first sight the numbers confirm the hypothesis of functional adaptation for Quichua and Guaraní (flexible languages): the distribution of loan nouns covers other syntactic functions apart from the prototypical one. On closer inspection, it is clear that the great majority of loan nouns perform the prototypical function, and
therefore functional adaptation is only partial. Comparatively, there is a difference between Quichua, on the one hand, and Guaraní and Otomí, on the other. Quichua is the most flexible of the three languages as regards the use of loan nouns. Less flexibility is observed in Guaraní and still less in Otomí. Notice that the high degree of rigidity observed in Otomí matches its system of parts of speech perfectly well, while the low degree of flexibility in Guaraní does not correspond to its typological characterization as a flexible language. In sum, the numbers confirm the hypothesis of lexical flexibility only for Quichua. The following table shows noun borrowing vis-à-vis the regular distribution of syntactic functions in the languages.

Table 10.18b Noun borrowing vs. regular distribution of syntactic functions

<table>
<thead>
<tr>
<th>SynFunc</th>
<th>Quichua Imbabura</th>
<th>Guaraní Urban</th>
<th>Otomí Santiago</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nouns</td>
<td>SynFunc</td>
<td>Nouns</td>
<td>SynFunc</td>
</tr>
<tr>
<td>HR</td>
<td>90.24%</td>
<td>32.7%</td>
<td>98.14%</td>
</tr>
<tr>
<td>HP</td>
<td>1.11%</td>
<td>33.1%</td>
<td>0.17%</td>
</tr>
<tr>
<td>MR</td>
<td>5.81%</td>
<td>6.1%</td>
<td>1.65%</td>
</tr>
<tr>
<td>MP</td>
<td>2.68%</td>
<td>13.6%</td>
<td>5.2%</td>
</tr>
</tbody>
</table>

A comparison of the distribution of syntactic functions of loan nouns with the regular distribution of syntactic functions in each language shows that the former is not determined in any important degree by the latter: put differently, we should exclude the regular distribution of syntactic functions as a linguistic factor modeling the distribution of loan nouns across syntactic functions. Thus, for example, borrowed nouns are used in the function of predicate phrase modifiers in Quichua in 13.6% of the cases but no case of this function is reported for loan nouns in Guaraní in spite of the fact that both languages have the same type of parts of speech (verbs vs. non-verbs). A language-specific analysis of the distribution of lexical classes is therefore required to account for the non-prototypical use of loan nouns in terms of typological and other linguistic factors.

**Spanish loan nouns used as heads of predicate phrases in Quichua**

The following examples show two Spanish nouns used as verbs in virtue of the gerund marker –*shpa* attached to the base:
The small landlord used to blush [from anger], get into fights and become infuriated up to the point of remaining silent all the time

Either the overseer or the foreman were looking after [the harvest] and each as if he were the owner

The predicative use of nouns in Quichua is unexpected because the language has a separate lexical class of verbs. On closer inspection, however, only *colera* ‘anger’ in (39) illustrate a noun used as a verb without further measures; (40) is a case of derivation through *-ya-*, which derives non-verbal classes, be they loan nouns like *dueño* ‘owner’ in (40) or native non-verbs like *puca* ‘red, redness’ in (39). Like cases of nominalization of loan verbs (cf. 10.4.1), those of verbalization of loan nouns have been excluded from the statistics. Apart from *colera* in (39), the other noun used as a verb in the Quichua corpus is *tunili* ‘barrel’, meaning ‘filling barrels’.

**Spanish loan nouns used as modifiers of referential phrases in Quichua**

Spanish nouns used as modifiers of referential phrases (adjectives) are the most frequent of loan nouns occupying non-prototypical slots. Consider these examples:

41) *quince año-manda pacha yanapa-shpa shamu-rca-ni cabildo ucu-pi*
    fifteen year-ABL time help-GER come-PST-1S council room-LOC
    ‘I came to help in the office of the council since I was fifteen years old’

42) *ña ca taita-cuna mana escuela-pi viñachi-rca,*
    S.POSS parent-PL NEG school-LOC grow-PST
    *shinapash castellano shimi-cuna-ta rima-i yachaju-ri-shca*
    however Castilian word-PL-ACC speak-INF learn-REFL-PRF
    ‘Our parents didn’t go to school, however they learnt to speak some words in Spanish on their own’
They said, ‘let us now divide [the community lands]’, but the division did not affect the wooded hillsides much.’

‘Meeting in our own communities and giving these talks in reference to health’

The semantic relation between the nouns of these examples is one of possession: the first noun (the modifier) indicates the possessor and the second noun (the head) indicates the possessed. Thus, the loan noun cabildo ‘council’ is the possessor of ucu ‘office’ in (41). Traditionally, nominal modifiers in possessive constructions occur after the head nouns with or without possessive -pak, except in cases of inalienable possession, where possessive -yuk is obligatory. In contrast, loan nouns in the above examples noun modify other nouns without the possessive marker. The loan noun castellano ‘Spanish language’ modifies Quichua shimi ‘language’ in (42).

Notice that castellano is a loan adjective itself, but it is used in colloquial Spanish as a noun referring exclusively to the Spanish language, while español ‘Spanish’ qualifies entities by referring them to their geographical, social and cultural origin. The last example of noun-noun modification (44) might be interpreted alternatively as a “pseudo-attributive” construction equivalent to a postpositional phrase, the head of which is the also loan noun parti ‘part’, which modern Quichua uses to reinforce the meaning of reference of the Quichua postposition -manta. Indeed, the phrase in (44) could be simply charlagucunata saludmanta ‘talks about health’.

Spanish loan nouns used as modifiers of predicate phrases in Quichua

Following the flexibility of parts of speech in Quichua, loan nouns can be used also as modifiers of predicate phrases, as illustrated in the following examples.

‘That is missing, joint work, if we work jointly, we can make progress’
In (45) gulpi ‘jointly’, phonologically adapted from Spanish golpe ‘hit, blow’, modifies the Quichua verb llancana ‘work’. From the phonological accommodation of the word and the distant semantic relation between the Spanish noun and the loan noun, it may be considered a relatively old loanword. The second example (46) involves the loan noun jila ‘uninterruptedly’, from Spanish fila ‘line’. While the accommodation of the loan noun to Quichua phonology reveals its old age, there is a closer relation between the source-language meaning and the target-language meaning. The third example (47) has the loan noun empeño modifying the Quichua verb rina. Unlike the previous loan nouns, this one seems a recent borrowing because no phonological accommodation has occurred (i.e. no rising of /e/ and /o/ to /i/ and /u/). Finally, the loan noun lástima (48) modifies the Quichua verb causac ‘live.HAB’, with the meaning of ‘pitifully’. As it seems, the borrowing of this loanword is the Andean Spanish expression hecho una lástima ‘in a pitiful state’. It is not possible to establish the age of lástima solely from its phonetic form in Quichua. Nevertheless, it is clear that a high level of bilingualism is required for the proper understanding of the Spanish expression which served as a model. All these examples demonstrate that Quichua uses loan nouns as predicate phrase modifiers without derivation.
Spanish loan nouns used as heads of predicate phrases in Guaraní

Typologically similar to Quichua, Guaraní is less flexible in the use of Spanish loan nouns. Still, cases of flexibility are well attested, as evidenced by the following examples of loan nouns used as heads of predicate phrases.

49) \textit{la che gente-kuéra \textit{che rú-gui o-lado}}

\begin{tabular}{llll}
\text{DET} & \text{1S.POSS} & \text{family-PL} & \text{\textit{1S.POSS} father-ABL} \\
\text{3-side} & \\
\end{tabular}

‘My family sides with my father’

50) \textit{nahàniri nd-o-difikultá-i}

\begin{tabular}{ll}
\text{NEG-3-difficulty-NEG} & \\
\end{tabular}

‘No, it will not be difficult’

51) \textit{ha entonces i-kuenta-vé-ta}

\begin{tabular}{llllll}
\text{and then} & \text{3S-account-more-FUT} & \text{ñà-ñe’è inglés que la Guaraní} & \\
\text{1PL.speak English than DET Guaraní} & \\
\end{tabular}

‘And then it is more important that we speak English than we speak Guaraní’

52) \textit{che igual-nte la ambo’e-ramo upéicha-nte avei che-paciencia-ta hese-kuera igual.}

\begin{tabular}{llllllllll}
\text{1S igual-just} & \text{DET 1S-enseñar-si así-solo también che-paciencia-ta hese-kuera igual.} & \\
\text{1S-paciencia-FUT 3.COM-PL igual} & \\
\end{tabular}

‘Also, when I teach, I will be patient with them as well.’

None of these examples involve derivation, because verbal morphology is attached directly to the base form of the loanword. Loan nouns used as verbs are assigned to different paradigms depending on their meaning, which is largely preserved given the high levels of bilingualism of Guaraní speakers: e.g. \textit{lado} ‘side’ and \textit{dificulta} ‘difficulty’ are used as \textit{areal} verbs while \textit{kuenta} ‘account’ and \textit{pasiensia} ‘patience’ are used as \textit{chendal} verbs.\footnote{Verbos areales (so called for the first-person prefix /a-/l) are distinguished from verbos aireales (from first-person prefix /ai-/l) and verbos chendales (from first-person prefix /che-/l).}

Spanish loan nouns used as modifiers of referential phrases in Guaraní

The use of loan nouns as modifiers of referential phrases is slightly more frequent in Guaraní (cf. 10.14). Consider the following examples extracted from the corpus:

53) \textit{ha la nde vecino roga piko moo y DET 2S.POSS neighbor house INT where}

‘And where is your neighbor’s house?’
First, notice that the loan noun constructor ‘builder’ in (57) is an example of attributive modification while the other loan nouns stand in a relation of possession to their respective head nouns. Similar constructions were attested in Quichua, where possessive constructions involving two juxtaposed nouns represent a large number of loan nouns in the syntactic slot of referential phrase modifier. In all cases of nominal modification, loan nouns are preposed to the noun heads without any derivation. On the other hand, the ambivalence of certain word forms like vecino ‘neighbor’ (53), campesino ‘peasant’ (56) or constructor ‘builder’ (57), all of which can be used in Spanish either as nouns or adjectives raises the question of their status. One way to answer this question is to collect a corpus of local Spanish and investigate whether they are used preferentially as adjectives or nouns and in which contexts. The occurrence of these lexemes in the Guarani corpus is too limited for a valid generalization. Still, it is likely that the exclusion of potentially ambiguous loanwords leaves few uncontested cases, thus compromising flexibility in Guarani.
Spanish loan nouns used as modifiers of predicate phrases in Guaraní

While there are no cases of Spanish loan nouns used in the syntactic position of predicate phrase modifier in the corpus, (58) below is an example of a loan noun used as a sentence modifier.

58) ha mba’émbo i-porã la ñane idioma, and because 3-nice DET 1PL.POSS language pero lástima la nd-o-servi-r-i but pity PRO.DEM NEG-3-be.useful-EUF-NEG
‘and it’s because our language is nice, but it is a pity that it is not useful’

Notice that lástima occurs also in Quichua (48), albeit with a slightly different meaning. In (58), however, lástima does not really modify the predicate servi ‘be useful’ but the whole sentence la ndoserviri. This is reflected in the English translation, where ‘it is a pity’ heads the sentence, instead of preceding the verb.

The examples discussed so far suggest that the lexical flexibility of loan nouns is only partial in Guaraní. While the language has a large potential for flexibility, it seems to make only a limited use of it in colloquial speech. The data point to the functional specialization of loanwords, i.e. their assignment to their syntactic slots in the source language. Because no typological constraints are involved, it seems realistic to assume that nonlinguistic factors play a decisive role here, in particular bilingualism. The analysis of other lexical classes and loan function words shall validate these provisional conclusions.

Spanish loan nouns used as heads of predicate phrases in Otomí

Because Otomí is a rigid language with a specialized class of nouns for the slot of head of referential phrase, it is not expected to use loan nouns flexibly in any way, which seems to be confirmed by the data. Still, there are a few cases of nouns used in non-prototypical slots. Consider the following examples of loan nouns used as heads of predicate phrases.

59) nu’bya ya=ngú ya=losa-’bya ya=teja
nowadays DEF.PL=house DEF.PL=cement-PRS DEF.PL=tile ya=laminä yá=njo’mü ya=ngú
DEF.PL=tin.sheet POSS.3PL=roof DEF.PL=house
‘Now houses are build of cement, tiles and tin sheets and have a roof...’

60) kwando ar=Alemán mbi=prisidente bi=hyo
when DEF.S=Alemán 3.PST=president 3.PRS=slaught boi go ba=ordenä-’ä ox EMPH 3.PST=order-EMPH.S.DIST
‘When Alemán was president he ordered the slaughter.’
The predicative use of nouns is a feature of Otomí (cf. section 8.3). Predicative nouns are preceded by any of a series of verbal proclitics or have a verbal suffix attached. Because nouns are used predicatively only in copulative constructions, they are not transitivized and their semantic value is preserved in full. The Spanish nouns *losa* ‘cement’ in (59) and *presidente* ‘president’ in (60) are linked via the verbal suffix /-bya/ and the proclitic /mbi/ to the referents *ya ngú* ‘the houses’ and *Alemán* (surname). The predicative use of nouns does not contradict the rigidity of parts of speech in Otomí because it does not involve those syntactic slots for which the language lacks a lexical class.

**Spanish loan nouns used as modifiers of predicate and referential phrases in Otomí**

The existence of a distinct class of nouns specialized in the syntactic function of head of referential phrase operates as a constraint on the use of loan nouns as modifiers. In this perspective, nouns are not expected to be used either as adjectives or adverbs. The corpus contains not a single case of a loan noun used adverbially, but a few of loan nouns used adjectivally. The latter are illustrated below.

61) `ne=r `fleko `majwi `ne `da=mát'=ar `seda
and=DEF.S fringe Indian.cloak and 3.FUT=spin=DEF.S silk
`nthu`yę `ne `gem`bu`bya `ne `da=tsut=ya `nts`ungu
handkerchief and after-ACT and 3.FUT=hang=DEF.PL earring

‘The fringed Indian cloak, and she will spin the silk handkerchief and after that she will put her earrings’

The three nouns used adjectivally in the Otomí corpus are *fleko* ‘fringe’ and *seda* ‘silk’ in (61), and *kadena* ‘chain’, not illustrated here. The low frequency of this use of loan nouns only confirms the rigidity of parts of speech in Otomí. In sum, the use of loan nouns in this language is coherent with its typological classification. A still, one question remains which is answered in the next section: how does Otomí use loan adjectives?

**10.4.3 The use of loan adjectives**

The contribution of loan adjectives to the borrowing process in terms of frequencies was discussed in section 10.3.3. It was found that Quichua is the language with the largest number of loan adjective, closely followed by Guaraní, while this class of loanwords is comparatively small in Otomí. In all, the data confirmed the borrowing hypotheses for Quichua and Guaraní but not for Otomí, where adjective borrowing was expected to be important (cf. H.4.3). In order to explain cross-linguistic
differences in the frequency of loan adjectives I put forward typological and non-typological factors. The exploration of continues in this section.

In analyzing the use of loan adjectives, it is necessary to consider the typology of the recipient languages in terms of parts of speech. Accordingly, none of the languages has a separate class of adjectives: their function is performed by non-verbs in Quichua and Guaraní and by morphosyntactic mechanisms in Otomí. Typologically, a language with a broader lexical class of modifiers or non-verbs is more likely to borrow loan adjectives than a language with no lexical class for this syntactic position. In this perspective the distribution of loan adjectives is not unexpected: the languages with a broader lexical class (Quichua and Guaraní) are precisely the ones that borrow adjectives most frequently, while the language without a lexical class borrows adjectives only seldom. If gap-filling is claimed, it is expected that a language without a specific lexical class borrows lexemes from this class preferentially. Nevertheless, the adding of a new word class to the system of parts of speech of a language implies a major typological change, and therefore gap filling through lexical borrowing is constrained by the natural tendency of linguistic systems to preserve their structural balance (cf. 3.1.4). How this tendency is reflected in the use of loanwords is an important part of the explanation.

Table 10.19a shows the distribution of loan adjectives per syntactic function in each recipient language. Table 19.b shows adjective borrowing vis-à-vis the regular distribution of syntactic functions in the languages.

### Table 10.19a Distribution of loan adjectives per syntactic slot

<table>
<thead>
<tr>
<th>SynFunc</th>
<th>Quichua</th>
<th>Guaraní</th>
<th>Otomí</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adjectives</td>
<td>Tokens</td>
<td>Tokens</td>
<td>Tokens</td>
<td>Tokens</td>
</tr>
<tr>
<td>HP</td>
<td>16</td>
<td>10</td>
<td>120</td>
<td>146</td>
</tr>
<tr>
<td>HR</td>
<td>287</td>
<td>199</td>
<td>11</td>
<td>497</td>
</tr>
<tr>
<td>MR</td>
<td>841</td>
<td>498</td>
<td>162</td>
<td>1501</td>
</tr>
<tr>
<td>MP</td>
<td>131</td>
<td>35</td>
<td>1</td>
<td>167</td>
</tr>
<tr>
<td>Adjectives</td>
<td>Types</td>
<td>Types</td>
<td>Types</td>
<td>Types</td>
</tr>
<tr>
<td>HP</td>
<td>10</td>
<td>7</td>
<td>53</td>
<td>70</td>
</tr>
<tr>
<td>HR</td>
<td>128</td>
<td>91</td>
<td>4</td>
<td>223</td>
</tr>
<tr>
<td>MR</td>
<td>327</td>
<td>242</td>
<td>25</td>
<td>594</td>
</tr>
<tr>
<td>MP</td>
<td>49</td>
<td>18</td>
<td>1</td>
<td>68</td>
</tr>
</tbody>
</table>

### Table 10.19b Adjective borrowing & regular distribution of syntactic functions

<table>
<thead>
<tr>
<th>SynFunc</th>
<th>Quichua Imbabura</th>
<th>Guaraní Urban</th>
<th>Otomí Santiago</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adjectives</td>
<td>Tokens</td>
<td>Adjectives</td>
<td>Tokens</td>
</tr>
<tr>
<td>HR</td>
<td>25.52%</td>
<td>32.7%</td>
<td>30.06%</td>
</tr>
<tr>
<td>HP</td>
<td>1.90%</td>
<td>33.1%</td>
<td>1.93%</td>
</tr>
<tr>
<td>MR</td>
<td>58.16%</td>
<td>6.1%</td>
<td>62.04%</td>
</tr>
<tr>
<td>MP</td>
<td>14.10%</td>
<td>13.6%</td>
<td>5.20%</td>
</tr>
</tbody>
</table>
Comparative Analysis: Lexical Borrowing

A comparison of the distribution of syntactic functions of loan adjectives with the regular distribution of syntactic functions in each language does not show any positive correlation. Accordingly, the regular distribution of syntactic functions cannot be seen as a linguistic factor modeling the distribution of loan adjectives across syntactic functions. For example, the percentage of loan adjectives in Bolívar Quichua used as heads of predicate phrases matches the number of loan adjectives with the same function in rural Guaraní, even though this syntactic function is considerably higher in the former language. This is positive evidence that the regular distribution of syntactic functions does not determine the distribution of loan adjectives in one or another function. At the same time, the perfect match between both languages as regards the predicative use of loan adjectives may be explained in terms of their system of parts of speech (flexible type-2), although it is not completely clear why Quichua should use adjectives predicatively at all, since an extended predicative function is only typical of Guaraní. The argumentation shows that a language-specific analysis of the functional distribution of lexical classes is required to account for the non-prototypical use of loan adjectives in terms of typological and other linguistic factors. This task is carried out in the following sections.

**Spanish loan adjectives used as heads of predicate phrases in Guaraní**

The use of loan adjectives as heads of predicate phrases is not surprising in Guaraní, given the capacity of this language to use any lexical class predicatively. Furthermore, a larger number of verbal adjectives were expected in the corpus. Consider these examples.

62) *Porque* *i-triste*-iteri *la* *re-hecha* *la* *mità* *o-ñe’e*-’y-va

because 3-sad-very PRO 2S-see DET child 3-speak-NEG-NOM

*castellano-pe*  *o-ñe-me’e*  *chupe*  *castellano-pe*  *la*  *lesión*

Spanish-LOC 3-MED-give 3.OI Spanish-LOC DET lesson

*porque*  *n-o-entendé-i*  *la*  *o-eskriví-(y)va*

because NEG-3-understand-NEG PRO.DEM 3-write-NOM

‘Because it is very sad to see that children do not speak [Guaraní] and they are given the lesson in Spanish because they do not understand what is written’
63) **i-porã** 3-good **i-ñ-importante** 3-EUPH-important **avei** also because **heta** henda-pe 3-useful **i-de-provecho.**

'It is very important because in many places it is useful’

64) **che ningo** nd-a-menda-i,

1S really NEG-1S-marry-NEG

**che-soltero.** a-reko peteĩ che raji

1S-single 1-have one 1S.POSS son

ha a-iiko la i-sy-ndl(y)e

and 1-have PRO.DEM 3.POSS-mother-with

'I didn’t get married, I’m single and have a boy, and he is with his mother now’

65) **to-ñe-mbo’e** chupe-kuéra hi’ã util-va’erã chupe-kuéra,

DES-MED-teach 3.OBJ-PL 3.seem useful-OBLG 3.OBJ-PL

**i-provechoso-va’erã** pe i-vida-diaria-pe

3-useful-OBLG DET 3.POSS-daily-life-LOC

'That they be taught [Guaraní] as it seems it has to be useful for their daily life’

The great majority of loan adjectives in Guaraní carry verbal prefixes from the chendal paradigm including **i-** ‘3S’ (62) or **che-** ‘1S’ (64). **Provechoso** ‘useful’, **triste** ‘sad’ and **importante** ‘important’ are inflected for third person, while **soltero** ‘single’ is inflected for first person singular. Notice that **útil** ‘useful’ in (65) carries the marker of deontic modality (obligation) instead. The complex borrowing **deprovecho** ‘useful’ in (63) has the same meaning of **i-provechoso** in (65). Because the verbal inflection acts as a copula strategy in the absence of a linking verb, the resulting constructions correspond to English copulative equivalents ‘it is useful’, ‘it is sad’, ‘it is important’ and ‘I am single’. These ‘verby’ adjectives have only a non-dynamic reading, i.e. they refer to states or qualities, hence their association with the verbal paradigm of stative verbs. Gregores and Suarez (1967: 133) state that “Spanish adjectives are adopted as quality [stative] verbs”, which agrees with the Guaraní system of parts of speech, where adjectives do not exist as a separate lexical class. Since there are more than three hundred different types of loan adjectives in the Guaraní corpus but only seven are used as verbs, the question is how the rest of the loan adjectives are used.
Spanish loan adjectives used as modifiers of referential phrases in Guaraní

The great majority of loan adjectives in Guaraní does not carry verbal morphology but occupy the syntactic slot of modifiers of referential phrases without any type of marking. Still, the coding of loan adjectives was not exempt from controversies. On the one hand, an important number of tokens correspond to the Spanish adjectives otro, alguno, and cualquiera. In spite of their classification as adjectives in the source language, these forms are distinct from other adjectives and their status is probably best defined as grammatical.¹⁶ They modify loan and native nouns alike, as illustrated in (189) and (190).

66) hikuái o-moí otro téra, o-mohéra hikuái Artigas
   3PL 3-put other name, 3-name 3PL Artigas
   ‘They gave it other name, they named it Artigas’

67) pero che cualquier mbaraka che ai-karãi-ta
   but 1S any guitar 1S 1S-play-FUT
   ‘But I will play any guitar’

On the other hand, an important number of adjectives occur in phrases whose noun heads are Spanish nouns, which suggests that both may be code switches rather than independent borrowings in one phrase. A large number of adjective-noun or noun-adjective constructions in which both constituents are Spanish have been therefore analyzed as code switches, even if native demonstratives are involved (68).

68) che-interesá ningo cheve pe [asunto deportivo]cs
   1.OBJ-concern well 1.OBJ DEM [matter sport]
   ‘I am interested in sport matters’

On the contrary, composites of two Spanish lexemes were analyzed as independent loanwords in two cases: a) if the syntactic position of the loan adjective does not coincide with its position in Spanish, as illustrated by entero ‘entire’ preposed to the noun head mundo ‘world’ in (69); and b) if gender or number agreement is absent, as illustrated by (70), in which the masculine ending does not agree with the feminine gender of the head noun inflamación ‘infection’. Both cases demonstrate that the loan adjectives are fully integrated to Guaraní morphosyntax and should be considered therefore as loanwords.

¹⁶ These forms can be used also as pronouns. This function is analyzed in the next chapter.
69) ikatahuaguiacha nde re-mo-sarambi ñandeve
so.that 2S 2-CAUS-spread 1PL.OBJ
amo entero mundo
DEM.DIST whole world
’So that you spread [the Paraguayan culture] all over the world’

70) o-jedecta pete pé pequeños inflamación
3-detect one small.M infection.F
ha upéa o-kosta oreve la aborto jey
and PRO.DEM 3-cost 1PL.OBJ DET abortion again
‘They detected a little infection and that cost us the abortion again’

Finally, some noun-adjective constructions were considered complex borrowings on the basis of the accommodation of their components to Guaraní phonology, the intonation contours and the recursiveness in the corpus: e.g. vida-diaria ‘daily life’ in (65) above.

The above examples show that the classification of loan adjectives in Guaraní is not straightforward. The fact that a large number of Spanish adjectives in the corpus occur in code switches suggests that this lexical class shows an incipient integration to the morphosyntactic matrix of Guaraní. While this statement disproves the hypothesis of functional adaptation, it is necessary to evaluate the findings for all the lexical classes.

**Spanish loan adjectives used as heads of referential phrases in Guaraní**

The following examples illustrate loan adjectives used as referential phrase heads.

71) o-hasa ha’e la iñ-alumno-ndi la segundo
3-pass 3S.be DET 3.POSS-student-with DET second
ha upéi o-hasá-ta vove la tercero-je
and then 3-pasar-FUT soon DET third-LOC
‘He promoted his students to second grade and then to third grade.’

72) che konosido-ndi(v)e ro-mombe’u chiste musika-re.
1S acquaintance-with 2.OBJ-tell joke music-to
‘With my acquaintances I tell jokes and listen to music.’

73) porque o-ñe-me’ê-ma escuela colegio-pe
because 3-MEDP-give-PRF school high-school-LOC
ha o-ñe-me’ê va’ekue hasta basico-nte
and 3-MEDP-give NMLZ.PST up.to elementary-just
‘As they received secondary instruction while others only elementary’
These examples contain different types of adjectives: the ordinal adjectives segundo ‘second’ and tercero ‘third’ in reference to school grades (71); the gentilic adjective boliviano ‘Bolivian’ (74); the adjectival participle konosido ‘known, acquaintance’ (72); and normal attributive adjectives básico ‘basic’ and fiel ‘faithful’. A large number of loan adjectives used as nouns correspond to gentilics. Interestingly, all the freestanding loan adjectives in the corpus correspond to freestanding adjectives in Spanish. The freestanding capacity of Spanish adjectives and Guaraní non-verbs in the referential phrase makes the syntactic analysis of loan adjectives particularly difficult. Guaraní-Spanish bilinguals are well aware of the freestanding occurrence of adjectives in Spanish, and therefore they may borrow adjectives precisely as nouns. The fact that many loan adjectives in the corpus correspond to ready-made expressions in Spanish partially confirm the argument: e.g. segundo grado ‘second grade’ is commonly abbreviated as segundo ‘second’, just like educación básica ‘elementary school’ is abbreviated as básica or básico ‘basic’. In this analysis, the use of a loan adjective is primarily determined by its use in the source language, especially if the speakers of the recipient language are bilingual.

Other loan adjectives are not freestanding forms in colloquial Spanish, even if they originate in old constructions involving a noun head: such is the case of fiel ‘faithful’ in (198), an abbreviated form of fiel cristiano ‘faithful Christian’. In this case, even if the adjective fiel ‘faithful’ exists in Spanish, it is wiser to interpret fieles as plural noun meaning ‘the congregation’. In case the speaker is bilingual enough to make this difference in Spanish, he will borrow fieles as a plural noun and accommodate it to the Guaraní morphosyntactic matrix. This is confirmed in (75) by the use of the optional plural marker.
In short, loan adjectives used as nouns are numerous in the corpus but their functional adaptation cannot be determined on account of two factors: the freestanding capacity of some Spanish adjective and the same capacity of non-verbs in Guaraní, in both cases without further measures; the bilingualism of Guaraní speakers, which makes them aware of the freestanding use of Spanish adjectives.

**Spanish loan adjectives used as modifiers of predicate phrases in Guaraní:**

Spanish loan adjectives used as modifiers of predicate phrases are few. Still, it is worth considering some examples insofar as they evidence the flexibility of the language.

76) **ko’ápe oñe’e meskládo.**

*here 3-speak mixed*  
*o-falta peteí ombo’eva’erã haguã la Guaraní*  
‘Here they speak confusingly; there is none who teaches Guaraní’

77) **a-lo-mejor o-jehe’a chugui o-ñe’e atravesado la**

*Perhaps 3-mix 3.ABL 3-speak crossed PRO*  
*o-ñe-e-ñe’-rõ chupe Guaraní ha castellano-pe*  
‘Perhaps they make a mixture out of it [Guaraní], they speak confusingly when they speak Guaraní and Spanish’

78) **che livianito-mi a-sena ha a-ke-ma**

*1S light:DIM(Sp)-DIM 1S-dinner and 1-sleep-PRF*  
‘I have a light dinner and got to sleep’

79) **jopará-ko hina [dos tres palabras] la Guaraní ha kastelláno**

*Jopará-truly PROG [two or three words] DET Guaraní and Spanish*  
*péro ko’ápe o-ñe-ñe’e la Guaraní lento*  
‘Jopara, a few words in Guaraní and Spanish, but here they speak Guaraní a bit’

The loan adjectives *mesklado* ‘mixed’ in (76) and *atravesado* ‘crossed’ in (77) occur in syntactic calques from Spanish: *hablar mezclado* ‘to speak a mixture’ and *hablar atravesado* ‘to mix languages in speech’. Both adjectives are participial forms. Notice that the adverbial use of participles is common in Spanish. The adjective *livianito* ‘light:DIM’ in (78) also occurs in a Spanish calque: *cenar (algo) liviano* ‘to eat (something) light for dinner’. Because *liviano* stands for the noun head *algo*
‘something’ in the Spanish expression, it should be considered an instance of a loan adjective used as a noun, hence the occurrence of the Spanish diminutive -ito and the Guaraní diminutive marker -mi.

Example (79) deserves special attention not only because it points to the functional adaptation of loan adjectives to the Guaraní system of parts of speech. The different semantics of the original Spanish form (‘slow’) and the loanword (‘more or less’) suggest that this entered Guaraní when bilingualism was incipient. It is precisely in the early stages of contact when the influence of bilingualism minimal and loanwords may be easily re-semanticized and accommodated to the system of parts of speech of the recipient language. The case of lento and a few others such as guapo (from guapo ‘handsome’, meaning ‘efficiently’ in Guaraní) confirm this assumption.

In sum, despite their small number, loan adjectives used as predicate phrase modifiers demonstrate the flexibility of the language, the same flexibility that is less visible in other cases for the influence of bilingualism on loanword usage.

**Spanish loan adjectives used as heads of predicate phrases in Quichua**

Spanish loan adjectives used predicatively in Quichua count ten different types. Here is one of them.

80)  

\[
\begin{array}{cccc}
\text{shina-mi} & \text{shina-mi} & \text{patron-ca} & \text{famado} \\
\text{thus-AFF} & \text{thus-AFF} & \text{landlord-TOP} & \text{famous:M} \\
\end{array}
\]

nin
REP

‘So it is, the landlord is famous’, they say’

Unlike Guaraní, Quichua cannot use other lexical classes than verbs in predicative function. Thus, the predicative use of adjectives is exceptional in Quichua. However, this use proves less exceptional on closer inspection.

Since no verbal morphology is attached to the loan adjective in (203), the predicative use of famado ‘famous’ is a side effect of the zero copula in third-person present-tense constructions – typical of Quichua and many other Amerindian languages. To the extent that (203) is not a case of copula elision but a grammatical mechanism of the language, it is expected to occur regularly, and indeed most instances of loan adjectives used as predicate heads in the corpus result from zero copula. This suggests that loan adjectives in Quichua are not used predicatively *strictu sensu*. Rather, they come to occupy the syntactic slot of the predicate phrase head as a result of the systematic drop of the copula in third-person present-tense constructions. Consider the following case of non-prototypical use of an adjective:

81)  

\[
\begin{array}{ccc}
\text{huaquin} & \text{curioso-ya-c-cuna-ca} \\
\text{some} & \text{curious-become-NMLZ-AG-PL-TOP} \\
\end{array}
\]

‘some of the people who became curious’
Similar to nouns, adjectives in Quichua can be verbalized through the changing-state marker /-ya-/ 'become'. An instance of this type of derivation is (40) above. Example (81) illustrates a verbalized adjective in a nominalized clause. Cases of loan adjectives used predicatively by virtue of derivation were not counted instances of flexible use (cf. supra). In sum, loan adjectives used predicatively in Quichua do not contradict the typological distinction of parts of speech in this language, because their use results from derivation.

Spanish loan adjectives used as heads of referential phrases in Quichua

The existence of a flexible lexical class of non-verbs in Quichua leads to expect loan adjectives used as nouns. In fact, loan adjectives used as nouns represent a quarter of the total number of loan adjectives, confirming the lexical flexibility of the language and the functional adaptation of loanwords. This adaptation corresponds to the incipient and compound levels of bilingualism in the Quichua communities investigated. Notwithstanding, several challenges to the analysis must be scrutinized. Consider the following examples.

82) cunan chai organización-kuna nombra-ri-shpa-ca
    today DEM.DIST organization-PL appoint-REFL-GER-TOP
    ña casi contrario-cuna-ima tucurishca can
    already so enemy-PL-some become-PST be-3
    ‘And now the organizations appoint themselves and have become almost enemies’

83) chai título-cuna-pash tiya-n, chai-huan ñucanchi
    PRO.DIST title-PL-ADIT there.be.3 DEM-INST 1PL
    ashata ashtahuan ricsi-shpa mayor-cuna-ta tapu-shpa-man
    much more know-GER elder-PL-ACC ask-GER-COND
    ‘There are also the land titles; with them we know more and could ask the elders’

84) ña importante ca-c ca-rca escuela-ca
    already important be-HAB be-PST school-TOP
    cunan-cuna-pi importante-pi chura-shpa
    now-PL-LOC important-LOC put-GER
    huahuacuna-ta-pash educa-chi-najunchic
    child-PL-ACC-ADIT educate-CAUS-RECP-1PL
    ‘The school used to be important; nowadays it is important to put [the money] in the important things, like educating our children’
Freestanding adjectives in Spanish may acquire a nominal status and replace noun heads in colloquial usage. The use of contrario in (82) and mayor in (83) are illustrative in this respect. The instances of importante in (84), on the contrary, point to a nominal use not motivated by the input of the source language, since importante requires the neuter article lo or the explicit use of a noun head to be grammatical in Spanish (e.g. asunto importante ‘important matter’). While these forms are adjectives in Spanish, it is not clear whether the speaker borrows them as adjectives or nouns, and whether this affects the use of loanwords. The issue is less important when dealing with incipient bilinguals, but it becomes crucial when dealing with coordinate bilinguals. The levels of bilingualism levels in the Quichua communities of Imbabura and Bolivar are lower than the levels attested in Paraguay, but important differences exist between both communities. The effects of bilingualism on the frequency and use of borrowings are addressed in section 10.6. For the time being, suffice it to say that the frequency of loan adjectives used as nouns confirm not only the classification of Quichua as a flexible language but also the fact that Quichua adapts loanwords to its own system of parts of speech. This is further confirmed by the cases of adjectives used as modifiers of predicate phrases.

**Spanish loan adjectives used as modifiers of predicate phrases in Quichua**

The following examples show Spanish loan adjectives used as manner adverbs in Quichua.

85) *unido* trabaj-aca ca-rca-nchic cai comunidad Topo-pi

united work-HAB be-PST-1PL DEM.PROX community Topo-LOC

‘In the community El Topo we work together’

86) *pai-cuna-pa ama unguy-cuna fasil-llo japi-ri-chun*

3-PL-BEN NEG sickness-PL easy-just catch-REFL-SUBJ

‘They do not catch sickness easily’

87) *ñacutin ishcai chacana-pi-ca shuc lado-ta ligero-ligero*

afterwards two ladder-LOC-TOP one side-LOC fast-fast

uriaju-mu-ni, ñacutin shuya-na tanda-naju-ngacaman

climb-CISL-HAB.PST afterwards wait-HAB meet-RECP-UNTIL

‘We climbed two ladders quickly on one side and waited there until the meeting’

88) *ñucanchi shimi-pi carin tranquilo riman-llo compañera-cuna*

1PL.POSS tongue-LOC AFF quiet speak-3-just fellow-PL

‘The fellow women speak easily in our language [Quichua]’
While the loan adjectives in the above examples function as modifiers of predicate phrases, some of them owe their function to syntactic calquing from Spanish and to the existence of a closed class of modifiers in this language which can be used indistinctively for referential and predicate phrases without further measures. Compare (85) and (88) with the Spanish expressions *trabajar unidos* ‘to work together’ and *hablar tranquilamente* ‘to speak softly’. In any case, it is always hard to tell whether a source-language construction motivated a syntactic calque: the century-long contact between Quichua and Spanish in the Ecuadorian Highlands have equally influenced both languages, and thus an expression in local Spanish may stem from a similar construction in Quichua as part of a recycling process (Spanish→Quichua→Spanish→…) in which it is very difficult to identify the ultimate source of the expression.

In general, loan adjectives in Quichua do not require a derivational process to be used as predicate modifiers, even though pragmatic markers may occur attached to them: e.g. *fasil* ‘easy’ in (86) carries the limitative marker /-lla/ ‘just’. Also, because reduplication is used for emphatic purposes in Quichua, loan nouns can be reduplicated for the same reason, like the loan adjective *ligero* in (87). Notice that the reduplication of loan adjectives in the position of predicate modifiers is not a derivational mechanism and therefore does not disprove the lexical flexibility of loan adjectives.

**Spanish loan adjectives used as heads of predicate phrases in Otomí**

Of the three languages Otomí is the one with the smallest number of loan adjectives and the least flexible as regards their use. The predicative use of loan adjectives in Otomí represents half of the loan adjective types. Some examples are the following:

90) \[\text{Nä nxutsi to } \text{diɾen-wi} \text{x=ar} \text{ bibo}\]

DEM girl who 1.PRS=play-DUAL much-DEF.S smart

‘The girl with whom I play is very smart’
91) No hyaxtho mbi=he ya=tsi datu dega
DEM daily 3.PST=wear DEF.PL=DIM clothing of
tsī manta tsī datu korryente
DIM cotton.blanket DIM clothing common
‘Daily they used little clothes of cotton blanket, little common clothing’

92) Nä‘ä nxutsi i ‘ñengi xe=r
DEM girl and play much= DEF.S obedient
obedyente
‘The girl who plays a lot is very obedient’

93) nesesaryo da=yq=pi ra=ye nā ra=nobyva
necessary 3FUT=ask-BEN DEF=hand DEM DEF=bride
‘It is necessary that he asks for the bride’s hand in marriage’

Loan adjectives used as verbs are accompanied by verbal proclitics and/or verbal suffixes. In a few cases, however, they occur in bare form: e.g. necesaryo ‘necessary’ in (93) occurs without proclitics at the beginning and the end of the sentence, with the meaning of ‘it is necessary’. This use is closely related to the borrowing of verbal forms and periphrastic constructions to express deontic modality, as shown in section 10.4. In general terms, though, the predicative use of loan adjectives does not contradict the predictions of the theory of parts of speech, because such usage is based on a typical Otomí characteristic: the use of verbal proclitics with non-verbal classes.

Spanish loan adjectives used as heads of referential phrases in Otomí

Spanish adjectives used as nouns in Otomí are few, but their analysis is worthwhile inasmuch as this use is completely unexpected in a rigid language.

94) ¿Ne xā‘ā ar=bindo tsi=mbane?
And INT DEF.S=colored DIM=godfather
Nā‘ā mī=thādī hingi ‘būi ar=bindo
PRO.DEM 3.IMPF=answer NEG 3.exist DEF.S=colored
‘And the colored, godfather? He answered: ‘the colored cow is not there’

Spanish bindo ‘colored’ in (94) is one of the four adjectives used as nouns in the Otomí corpus. Similar to native nouns, bindo is accompanied by the proclitic ar indicating definiteness and singular number. Notice that quality verbs playing the role of adjectives in Otomí (cf. Chapter 8) can be accompanied by nominal proclitics provided there is an explicit noun head in the phrase. However, this is not the case in the above examples. Both instances of bindo occupy the syntactic slot of head of
referential phrase because of the elision of the noun head, the referent of which cannot be inferred from the context of the utterance in (94). But is bindo an adjective or a noun? I claim that the few loan adjectives occurring as freestanding forms in referential phrases do not make a flexible class along with nouns. In fact, the absence of adjectives and manner adverbs exist in Otomí leads to assume that loan adjectives enter Otomí typically as quality verbs, hence their prominent occurrence as heads of predicate phrases (cf. supra).

**Spanish loan adjectives used as modifiers of referential phrases in Otomí**

A number of Spanish loan adjectives are used as modifiers of referential phrases in Otomí, despite that this language does not have a lexical class of adjectives. Consider the following example:

95) `ref'aja jā`i mi=heke, ne gaho yā=wa, gaho-r

Ten people 3.IMPF=cut.off and all 3.POSS=leg all-DEF.S

ximhni, gg-r sentro gaho mi=gaho mi=gkwi honje

Skin all-DEF.S trunk all 3.IMPF=all 3.IMPF=get only

pur karne ar=ngo limpyo

Pure meat DEF.S=meat clean

'Ten people cut off one big bull, they cut off everything, his legs, his skin, his trunk, and they got only meat, pure meat.'

96) Hö ya=nei asta `rato kwadiya ne ya=nxutsi

Yes DEF.PL=dancer until six team and DEF.PL=girl

ne ya=meisi `rato ya=nei prinsipal ge Nxemge

and DEF.PL=boy six DEF.PL=dancer principal COP Saint.Michael

'Yes, there are up to six teams of dancers, boys and girls, and six principal dancers from San Miguel.'

In (95) the Spanish adjective limpyo `clear/clean' modifies the Otomí noun ngo `meat'. Also, the loan noun prinsipal `principal' modifies the Otomí noun nei `dancer' in (96). Both loanwords, however, do not carry verbal morphology, as expected from quality verbs. This suggests that we are before an incipient process of lexicalization (cf. H.7) by which the recipient language is replacing morphosyntactic strategies like compounding with lexical items for the modification of noun phrases. In other words, Otomí is seemingly undergoing an incipient contact-induced change consisting in the formation of a new lexical class specialized in the modification of referential phrases. The data suggests that a similar process is taking place in relation to loan adverbs.

17 The resulting phrase limpyo ngo alternates with the code switch pur karne `clean meat'.
10.4.4 The use of loan manner adverbs

The contribution of manner adverbs in the three languages is small if compared to other lexical classes. This is not surprising given the lower frequency of modifiers in relation to heads in most languages and the lower frequency of lexical adverbs in colloquial Spanish as compared to adverbial periphrastic constructions. Therefore, a comprehensive view of adverb usage in the three languages requires the comparison of the findings presented in this section with the analysis of complex borrowings playing an adverbial role (cf. 10.4.5). The following table shows the functional distribution of loan manner adverbs.

<table>
<thead>
<tr>
<th>SynFunc</th>
<th>Quichua</th>
<th>Guarani</th>
<th>Otomi</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Verbs</td>
<td>Tokens</td>
<td>Tokens</td>
<td>Tokens</td>
<td>Tokens</td>
</tr>
<tr>
<td>HP</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HR</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MR</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MP</td>
<td>88</td>
<td>95</td>
<td>31</td>
<td>214</td>
</tr>
<tr>
<td>Types</td>
<td>Types</td>
<td>Types</td>
<td>Types</td>
<td></td>
</tr>
<tr>
<td>HP</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HR</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MR</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MP</td>
<td>37</td>
<td>45</td>
<td>10</td>
<td>92</td>
</tr>
</tbody>
</table>

Compared to nouns and adjectives, manner adverbs show uniform results. They occupy the syntactic slot of predicate phrase modifiers without exception. Accordingly, no flexibility in the use of this class of loanwords is attested. While this distribution meets our expectations for rigid languages, it is not what was expected from flexible languages in which a broad class of non-verbs is used, among other functions, for the modification of predicate phrases. Therefore, the main question for flexible languages is why manner adverbs do not show the same syntactic flexibility of nouns and adjectives. For Otomi, on the contrary, the question is why manner adverbs are borrowed at all, since the language does not have a lexical class of predicate phrase modifiers.

Spanish loan manner adverbs in Guarani

Spanish manner adverbs derived from adjectives are characterized by the adverbial suffix -mente: e.g. exacto ‘exact’ + -mente ‘-ly’ → exactamente ‘exactly’. Derived adverbs are not uncommon in Guarani. Here are some examples.

97) sinceramente a-agradece ndeve upéa-re
   honestly 1S-thank 2.OBJ PRO.DEM-for
   ‘I sincerely thank you for that’
Loan manner adverbs differ in the way they are used. They can be used as modifiers of verbs: the loan adverb **sinceramente** ‘sincerely/honestly’ in (97) expresses the manner of giving thanks to the interlocutor. Further examples of this use are **tranquilamente** in (98) and **exactamente** in (99). Loan manner adverbs can be used also as modifiers of other adverbs: the loan adverb **justamente** in (100) modifies the time adverb **ko’āga** ‘now’. In addition, the corpus contains cases of loan manner adverbs modifying loan adjectives. These cases, however, have been considered instances of code switching for their low frequency in the corpus and their lack of integration in the morphosyntactic matrix. Finally, there are a few cases of loan manner adverbs whose scope is the sentence instead of the phrase and which have not been included in the statistics. In all, manner adverbs whose scope is the predicate phrase are relatively uncommon in the corpus.

### Spanish loan manner adverbs in Quichua

Most loan manner adverbs in the Quichua corpus focus on the predicate phrase, as illustrated with the following examples.

101) **legalmente** cati-shpa-ca derecho-ta chari-nchic-mi
    legally follow-GER-TOP right-ACC have-1PL-AFF
    ‘Legally speaking, we have the right’

102) **obligadamente** estudia-chi-chun, ama migración-ta japi-chun
    obligatorily study-CAUS-SBJ NEG migration-ACC take-SBJ
    ‘They are forced to study obligatorily so that they do not choose to migrate’
103) **ch**ai tiempo-*ca* **generalmente** ufiai ufiai
DIST time-TOP generally drink-INF drink-INF

‘In those times people in general drank and drank’

In addition, there are a few instances of Spanish manner adverbs with other scopes than the phrase. An example is **totalmente** ‘completely’ (104) which modifies the loan adjective **prohibido** ‘forbidden’.

104) **ch**ai-*ca* **totalmente** prohibido-*ta*,
PRO.DEM-TOP completely forbidden-ACC
huahua-*cuna-*ta  **ch**ai-*pi*  trabaj**a**-*chi-*ca
child-PL-ACC there-LOC work-CAUS-TOP

‘That [is] completely forbidden, to make children work there’

Notice that **totalmente prohibido** ‘completely forbidden’ is not a code switch because the accusative marker *–ta/* occurs on the second element. Composites of two Spanish loanwords are not uncommon in the corpus. Their status is explained by Myers-Scotton (2002: 114ff) as a compromise between the syntax of the source language and the morphology of the recipient languages.

**Spanish loan manner adverbs in Otomí**

Otomí does not have a separate class of modifiers of predicate phrases, but the corpus contains a number of loan manner adverbs. Here are two examples.

105) **ha**  **nu’bu**  ga=*’ygt’e*  **malmente**  **ke**  hinga
and when 2.PST=do wrongly ke NEG

‘Our Lord, and when you do wrong…’

106) **a**  **bos**  **ma**  **melt’o**  kwando  mi=nthätti
EXCL pues TEMP before when 3.IMPF=marry
**ya=’jä’i**  **ena**  mi=nthätti  **hngd’i**  nää  ena  ya=thiiza
DEF.PL=person REP 3.IMPF=marry only DEM REP DEF.PL=sandal
**mi=t’it’i**  **’na**  **ya=pahni**  **mi=he**  **ya=ngode**  **’na**
3.IMPF=wear one DEF.PL=shirt 3.IMPF=wear DEF.PL=skirt one

‘Well in the past when people married, they used to wear sandals and shirts and skirts, that is, they married poorly, not like people marry today’
In (105) the loan adverb *mälmente* from Spanish *malamente* ‘badly’ modifies the verb *'ye'ñe* ‘to do’. Similarly, the Spanish adverb *pobremente* ‘poorly’ in (106) modifies the verb *thäti* ‘to marry’. The fusion of the loan manner adverb and the Otomí quantifier *'na* stresses the poor quality of marriages in the past. Consider now the following example:

107) *prinsipalmente* *nuya* *behñä* *hokya* *muñeka*

mainly DEM woman make doll

“Women mainly make dolls”

The manner adverb *prinsipalmente* does not modify the verb head but the sentence as a whole. While these cases are only a few, they were not included in Table 10.20 because their scope of modification goes beyond the predicate phrase. Non-manner adverbs were not included either for the same reason. Still, the occurrence of non-manner adverbs (663 tokens of 61 types) cannot be overlooked. In fact, they are the second most frequent class in the Otomí corpus (cf. supra). Considering the adverbial use of adverbs in the previous examples but also the large number of loan adverbs, it is not unwise to suggest that modern Otomí is creating a specialized lexical class for the modification of predicate phrases and other constituents. Thus, a process of lexicalization of phrasal modifiers is underway. Further evidence of this process is the extensive use of adverbial periphrases (complex borrowings), as shown in the following section.

### 10.4.5 The use of complex borrowings

Two controversial issues concerning phrasal borrowings are their alternative interpretation as code switches and the analysis of their syntactic roles in terms of parts of speech. The first issue was dealt with in sections 4.2.2 and 10.1. The second issue turned out more problematic because it hindered the evaluation of phrasal borrowings in the framework of the parts-of-speech theory. This section looks into the syntactic functions of phrasal borrowings in the recipient languages. Table 10.7 presents the distribution of phrasal borrowings (types) in the four syntactic functions.

<table>
<thead>
<tr>
<th>SynFun</th>
<th>Q</th>
<th>G</th>
<th>O</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>HR</td>
<td>15</td>
<td>1</td>
<td>38</td>
<td>54</td>
</tr>
<tr>
<td>HP</td>
<td>0</td>
<td>2</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td>MR</td>
<td>5</td>
<td>2</td>
<td>0</td>
<td>7</td>
</tr>
<tr>
<td>MP</td>
<td>80</td>
<td>22</td>
<td>3</td>
<td>105</td>
</tr>
</tbody>
</table>

Table 10.21 Distribution of complex borrowings per syntactic function
The function of predicate phrase modifier is the most frequent in the three languages. The function of referential phrase head ranks second in frequency, and those of predicate phrase head and referential phrase modifier are only marginal. A language-specific analysis shows differences in the distribution of syntactic functions. On the one hand, complex borrowings are not used as heads of predicate phrases in Quichua, while complex borrowings are not used as modifiers of referential phrases in Otomí. On the other hand, considering that MP and HR are the most frequent syntactic functions performed by phrasal borrowings, it is remarkable that Guaraní shows one single case of HR and Otomí hardly three cases of MP. I interpret the low frequency of these uses in Guaraní and Otomí as motivated differentially by the high levels of bilingualism among Guaraní speakers and the lack of a separate lexical class of adverbs in Otomí.

The widespread use of phrasal borrowings as predicate phrase modifiers (a prototypical adverbial function) is determined by the high frequency of periphrastic constructions for the expression of manner in Spanish. Interestingly, the high frequency of adverbial periphrases explains why loan manner adverbs are borrowed only marginally (cf. section 10.3.4). This is particularly visible in Quichua: the function of predicate phrase modifier in this language is 13.6% (cf. Table 10.7b) while the percentage of manner adverbs of all lexical borrowings is only 0.7%. The gap between the comparatively high frequency of predicate phrase modifiers and the low frequency of loan manner adverbs is bridged by complex borrowings performing this syntactic function.

Complex borrowings occupying the syntactic slot of heads of referential phrases include proper nouns referring to places (toponyms) and people (patronyms) as well as Spanish terms from the fields of administration and economics. The presence of these borrowings is not problematic given their widespread occurrence in contact situations (toponyms and patronyms are among the first words to be borrowed, even in cases of null or incipient bilingualism). Furthermore, the use of complex borrowings as referential phrase heads agrees with the privileged position of nouns in lexical borrowing. On the other hand, the use of complex borrowings as heads of predicate phrases in Guaraní and Otomí is explained by the predicative use of non-verbal lexemes in these languages.

A considerable number of complex borrowings do not have a specified syntactic function, because their function does not correspond to any syntactic slot of the source language, albeit their formal status is identified. Thus, *de base* 'of base' is a prepositional phrase in Spanish but its function in the target language is ambiguous: it can be used either as an adjunct qualifying a noun head or as an adverbial phrase.

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18 Other functions of phrasal borrowings corresponding to grammatical classes are analyzed in Chapter 11.
19 Compare the extensive use of lexical manner adverbs in English.
modifying a verb. More often than not the function varies depending on the recipient language. The same can be said of the prepositional phrase *a según* ‘according to’, used as a connective in Quichua and a discourse marker in Guarani. Even if the syntactic function of complex borrowings can be established in several cases, they are different from complex items (root plus bound morpheme) because the latter can be clearly assigned a syntactic function.

The above analysis shows that the functions performed by complex borrowings in the source language and the recipient languages determine the occurrence of such borrowings. Thus, the occurrence of complex borrowings used as referential phrase heads is explained by the presence of phrasal constructions in the source language that refer to places, people, things and events proper of the contact situation. Similarly, the fact that the source language makes a frequent use of a large number of adverbial periphrases accounts for a large number of complex borrowings. Finally, the use of a small number of complex borrowings as predicate phrase heads in Guarani and Otomí is explained by the predicative potential of non-verbal classes in these languages.

This section concludes the cross-linguistic analysis of lexical borrowings in terms of frequencies and functional adaptation. In the following sections I undertake a similar analysis of loanwords, this time from the point view of dialects and bilingualism, with a view to understanding how linguistic and non-linguistic factors interplay with each other to produce specific borrowing configurations.

### 10.5 Dialectal variation in the distribution and use of lexical borrowings

The corpus of each language of the sample consists of two subcorpora corresponding to different dialects or sociolects. The corpus of Ecuadorian Quichua includes data from Imbabura (northern highlands) and Bolívar (central highlands). The corpus of Querétaro Otomí consists of the dialects of Santiago Mexquititlán and Tolimán. In contrast, Paraguayan Guarani comprises the urban and rural sociolects. The present section discusses the data on lexical borrowing from the perspective of dialects or sociolects. The goal is to identify tendencies in the borrowing behavior of speakers depending on their lect. The findings shall added value to the overall results of lexical borrowing inasmuch as they provide a further testing of the borrowing hypotheses. The analysis focuses on four parameters: a) the general distribution of lexical borrowings; b) the contribution of codeswitching as compared to linguistic borrowing; c) the distribution of parts of speech; and d) the use of loanwords in the recipient languages. The dialect-based results of lexical borrowing are presented Table 10.22.
Table 10.22 General distribution of borrowings per dialect or sociolect

<table>
<thead>
<tr>
<th>Source</th>
<th>Tokens %</th>
<th>Language</th>
<th>Types %</th>
<th>TTR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quichua</td>
<td>Imbabura</td>
<td>21.3</td>
<td>21.9</td>
<td>0.27</td>
</tr>
<tr>
<td></td>
<td>Bolívar</td>
<td>11.7</td>
<td>13.9</td>
<td>0.39</td>
</tr>
<tr>
<td></td>
<td>Urban</td>
<td>17.7</td>
<td>22.8</td>
<td>0.27</td>
</tr>
<tr>
<td></td>
<td>Rural</td>
<td>16.8</td>
<td>24.8</td>
<td>0.41</td>
</tr>
<tr>
<td></td>
<td>Santiago</td>
<td>12.5</td>
<td>19.0</td>
<td>0.14</td>
</tr>
<tr>
<td></td>
<td>Tolimán</td>
<td>16.8</td>
<td>27.8</td>
<td>0.15</td>
</tr>
</tbody>
</table>

These data confirm the following tendencies: a) the ranges of dialectal (or sociolectal) variation in lexical borrowing distinguish Quichua and Otomí from Guaraní insofar as the latter shows a minimum range of variation between lects; b) the widest range of variation in lexical borrowing is found in Quichua. These tendencies attest the greater dialectal distance between Imbabura and Bolivar and the closeness between urban and rural varieties in Paraguayan Guaraní in relation to borrowing behavior. While the tendencies observed in Table 10.4 are identified from the analysis of tokens, no substantial differences come up when types are considered: Quichua and Guaraní remain the languages with the largest and shortest ranges of variation in relation to lexical borrowing.

In order to have a clear picture of the influence of Spanish across dialects, it is crucial to identify the characteristics of code switching number in each dialect. Table 10.23 shows the distribution of codeswitching per dialect: the number of switched tokens, the mean length of switches, and the average of switches and tokens per speaker. On a chi-square test this table was found to be significant at 0.5%, which means that the distribution of loanwords per lexical class and syntactic function is not random: it describes a clear tendency in the borrowing data.20

Table 10.23 General distribution of codeswitching per dialect or sociolect

<table>
<thead>
<tr>
<th>Source</th>
<th>Quichua</th>
<th>Guaraní</th>
<th>Otomí</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Imbabura</td>
<td>Bolívar</td>
<td>Urban</td>
</tr>
<tr>
<td>Total switches</td>
<td>489</td>
<td>116</td>
<td>1298</td>
</tr>
<tr>
<td>Total switched tokens</td>
<td>1929</td>
<td>371</td>
<td>7963</td>
</tr>
<tr>
<td>Mean length/switched tokens</td>
<td>3.9</td>
<td>3.2</td>
<td>6.1</td>
</tr>
<tr>
<td>Mean switches/1000 words</td>
<td>13.1</td>
<td>14.3</td>
<td>32.7</td>
</tr>
<tr>
<td>Mean switches/speaker</td>
<td>40.8</td>
<td>14.5</td>
<td>56.4</td>
</tr>
<tr>
<td>Mean length/switch/speaker</td>
<td>160.8</td>
<td>46.4</td>
<td>346.2</td>
</tr>
</tbody>
</table>

20 The results of the chi-square tests for the relevant tables are included in the Appendices.
The data re-confirm the difference between Imbabura Quichua and Bolivar Quichua: the number of switches and tokens in Imbabura is four and five times larger, respectively. Although the mean length and the average of switches per 1000 words are similar in both dialects, the number of switches and their mean length per speaker are far larger in Imbabura. In other words, Imbabura is more influenced by Spanish not only in terms of borrowing but also of codeswitching, which in turn confirm the higher levels of bilingualism in Imbabura. Finally, the data provide further support to the characterization of Imbabura as an innovative variety subject to major changes induced by contact with Spanish.

The differences between Otomí dialects are less remarkable but still concordant with the overall tendencies of lexical borrowing. The occurrence of codeswitching in Otomí is highly restricted. Still, Spanish codeswitching seems more influential in Tolimán: the four times more switched tokens and fifteen times longer switches. Notwithstanding the differences, the distance between Otomí dialects in terms of codeswitching is less prominent than the distance between Quichua dialects.

Codeswitching in Guaraní is the largest of the three languages but marked differences exist between urban and rural lects. Urban Guaraní makes a more extensive use of codeswitching than rural Guaraní: the former variety shows three times more switched tokens. Although the average number of switches per speaker is similar in both varieties, the mean length of switches is two times larger in the cities. As a whole, the figures make a clear-cut distinction between urban Guaraní (Jopara) and rural Guaraní (Guaraníete) in codeswitching, albeit both varieties show similar tendencies in borrowing. The question now is whether these differences turn up when classes of loanwords are considered.

The frequency of loanwords per lexical class across languages showed that: a) Quichua has the largest number of loan nouns in comparison to Guaraní and Otomí; b) the numbers of loan verbs and loan adjectives are comparable for Quichua and Guaraní, but both classes are clearly underrepresented in Otomí; and c) Otomí shows the largest number of loan adverbs in comparison with Guaraní and Quichua, although the contribution of loan manner adverbs is negligible in the three languages. Let us see if these tendencies recur across dialects by comparing the data of the following table. The distribution was found to be significant at 0.5% on a chi-square test (cf. Appendices).

<table>
<thead>
<tr>
<th>Table 10.24 Distribution of parts of speech per dialect or sociolect</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Nouns %</td>
</tr>
<tr>
<td>Verbs %</td>
</tr>
<tr>
<td>Adjectives %</td>
</tr>
<tr>
<td>Manner Adverbs %</td>
</tr>
</tbody>
</table>
The first impression is that the ranges of dialectal variation in terms of lexical categories are minimal. Still, two differences are remarkable in this respect: the first gap occurs in noun borrowing between Imbabura and Bolivar, with a range of variation of 9% in favor of the former dialect; the second gap occurs also in noun borrowing between urban and rural varieties of Guaraní, with a range of variation of 13% in favor of the rural sociolect. Provisional explanations for these gaps have to do with the social positioning of the speakers. Imbabura Quichua speakers are known for their involvement in local politics and economy, enjoying a more prosperous status than their fellow Indians from Bolivar. I assume that the active participation of Imbabura speakers in the Spanish-speaking society motivates the borrowing of a large number of loanwords referring to objects and practices of that society. If the same argument is held for the sociolects of Guaraní, the urban variety is expected to have a larger number of loan nouns, but that is not the case. I do not have a satisfactory explanation for the larger number of nouns in Guaraníete, but assume there exists some kind of complementary distribution between codeswitching and borrowing, such that the lower degree of the former mixing mechanism is partially compensated by a higher degree of lexical borrowing, in particular of the most borrowable items, i.e. nouns. Whatever the case may be, the differences should not make us overlook the overall tendency: the extremely high degree of similarity between dialects and sociolects in the borrowing of lexical classes. I interpret this similarity as evidence that the dialects of each language are typologically similar and thus empirically comparable.

What happens if the analysis of dialectal variation is taken farther? This last step consists in the analysis of dialectal variation in the usage of loanwords. Table 10.25 shows the frequency of borrowings per lexical class and syntactic function for each dialect. The frequencies were found to be significant at a 0.5% level on a chi-square test (cf. Appendices).

The analysis of loanwords by lexical class and syntactic function confirmed that verbs and adverbs behaved differently from nouns and adjectives in the three languages: the former are used always in their prototypical positions while the latter often occupy different syntactic slots depending on the language. This tendency is confirmed at the level of dialects: loan verbs and loan manner adverbs are used only in their own syntactic slots. Furthermore, the percentages confirm similar borrowing behaviors across varieties. Yet, the differences in the use of nouns and adjectives require a language-specific consideration.
Table 10.25 Functions of loanwords per parts of speech and dialect

<table>
<thead>
<tr>
<th></th>
<th>Quichua (%)</th>
<th>Guaraní (%)</th>
<th>Otomí (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Imbabura</td>
<td>Bolívar</td>
<td>Urban</td>
</tr>
<tr>
<td>N</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HR</td>
<td>90.2</td>
<td>97.5</td>
<td>98.1</td>
</tr>
<tr>
<td>MR</td>
<td>5.8</td>
<td>1.1</td>
<td>1.6</td>
</tr>
<tr>
<td>HP</td>
<td>1.1</td>
<td>0.4</td>
<td>0.2</td>
</tr>
<tr>
<td>MP</td>
<td>2.7</td>
<td>0.9</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>MP</th>
</tr>
</thead>
<tbody>
<tr>
<td>V</td>
<td>100</td>
</tr>
<tr>
<td>Adj</td>
<td></td>
</tr>
<tr>
<td>MR</td>
<td>58.2</td>
</tr>
<tr>
<td>HR</td>
<td>25.5</td>
</tr>
<tr>
<td>MP</td>
<td>14.1</td>
</tr>
<tr>
<td>HP</td>
<td>1.9</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Adv</th>
<th>MP</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>100</td>
</tr>
</tbody>
</table>

The lowest degree of flexibility is attested in the Otomí dialects. The only flexible uses in Santiago Otomí include three types of loan nouns used as modifiers of referential phrases and two types of loan adjectives used as head and modifier of predicate phrases, respectively. These uses hardly represent 0.2% of the total number of tokens. The use of loan nouns and loan adjectives as heads of predicate phrases and the rigid use of borrowings occur in both dialects of Otomí. It remains to see if the flexibility of nouns and adjectives shows a similar distribution across dialects.

Quichua and Guaraní dialects show the highest degree of flexibility in accordance with the typology of their systems of parts of speech. On the one hand, the flexible use of nouns and adjectives is rather uniform across dialects, although the percentages are low in certain cases. On closer examination another tendency is observed: the flexibility in Bolivar Quichua and rural Guaraní is fairly reduced, because they show a clear preference for the use of loan nouns and loan adjectives in their prototypical syntactic functions. Flexibility continues to be operative in Bolivar Quichua and urban Guaraní, but it is limited by the prototypical syntactic functions of loan items. The cross-dialect analysis of the borrowing data gives the following results:

a) All the dialects show a high degree of similarity with respect to the borrowing of lexical classes and their distribution.

b) Borrowing variation in Guaraní seems less influenced by dialectal than other, possibly sociolinguistic factors (e.g. bilingualism);
c) The dialectal distribution of loanwords confirms the greater divergence between Quichua dialects in comparison to Guaraní and Otomí dialects;
d) Imbabura Quichua and urban Guaraní are different from their dialectal counterparts in terms of codeswitching. However, the frequency of codeswitching matches the frequency of lexical borrowing in Imbabura Quichua, but not in urban Guaraní, where codeswitching is much more important than lexical borrowing.
e) Otomí dialects share the rigidity in the use of Spanish loanwords. In contrast, the flexibility of nouns and adjectives in Quichua and Guaraní occurs mainly in their innovative varieties: Imbabura Quichua and urban Guaraní.

10.6. Bilingual performance in the frequency and use of lexical borrowing

It has been mentioned throughout this study that linguistic borrowing is closely related to bilingualism in several ways. This section explores one of these ways: the influence of bilingual performance on the distribution and use of lexical borrowings. The sociolinguistic characterization of previous chapters has shown that bilingualism is a major factor in the contact situations under scrutiny. For the sake of space, however, I limit my analysis to the influence of bilingual performance on lexical borrowing in Quichua. This choice is based on the variety of levels of bilingualism in the Quichua speech community, which enables an extensive testing of the borrowing hypotheses. Such a testing is not feasible in Guaraní because bilingualism is generally more uniform and widespread in Paraguay. It is not feasible in Otomí either, because bilingualism in this language is generally lower.

The present analysis focuses on the texts produced by twenty Quichua speakers, of whom I have empirical evidence of their level of bilingualism on the basis of relevant sociolinguistic information and control samples of their Spanish idiolects. For the remaining speakers of the Quichua corpus neither the sociolinguistic information nor the samples were sufficient to establish their real level of bilingualism, for which reason they are left out of the analysis. Speakers were grouped according to their level of bilingualism in: incipient bilinguals (7 speakers: 4 from Imbabura, 3 from Bolivar); compound bilinguals (9 speakers: 5 from Imbabura, 4 from Bolivar); and coordinate bilinguals (4 speakers: 3 from Imbabura, 1 from Bolivar). Incipient bilinguals include five men and two women, all of them illiterate and above their fifties. The men work their own plots of land and go to neighboring cities to work as masons or in other temporary jobs; the women work at home and leave their communities only to sell and buy staples. The economic status of this group is generally low while geographical mobility is limited to the province in most cases. Compound bilinguals include six men and three women, all of them literate. Most finished the elementary school and lived for a few years in the capital city. They work in the service sector inside and outside their communities. The
women frequent the cities of Otavalo and Ibarra in Imbabura, and Guaranda in Bolivar. There they sell part of the produce of their plots. The social mobility and the economic status of this group do not differ much from those of the previous group. Coordinate bilinguals include two men and two women in their twenties and thirties. All of them have completed at least the third year of secondary school. Two of them work as teachers at the elementary schools of their communities. This group has permanent contact with the Spanish-speaking society through commercial activities, formal schooling and mestizo friends. Social mobility is the main concern for the members of this group, who look to improve their socioeconomic status even at expense of their community links.

A subcorpus was collected from the entire Quichua corpus for each group. The subcorpora are different in size because the number of speakers in each group is different too. The three subcorpora were analyzed in order to obtain the distribution of borrowings, code switches, lexical classes of loanwords, and lexical classes of loanwords and syntactic function. The following table shows the distribution of borrowings in the three groups of bilinguals. The table was found to be significant at 0.5% on a chi-square test (cf. Appendices).

### Table 10.26 Distribution of Spanish borrowings per level of bilingualism

<table>
<thead>
<tr>
<th>Quichua</th>
<th>Incipient</th>
<th>Compound</th>
<th>Coordinate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Tokens</td>
<td>Types</td>
<td>Tokens</td>
</tr>
<tr>
<td>Spanish borrowings %</td>
<td>18.2</td>
<td>19.1</td>
<td>22.5</td>
</tr>
<tr>
<td>Minimum %</td>
<td>3.9</td>
<td>3.9</td>
<td>10.6</td>
</tr>
<tr>
<td>Maximum %</td>
<td>24.2</td>
<td>25.8</td>
<td>26.9</td>
</tr>
<tr>
<td>TTR</td>
<td>0.4</td>
<td>0.3</td>
<td>0.4</td>
</tr>
</tbody>
</table>

The percentages do not show a major variation between the three groups. The difference between the group with the largest number of borrowings (compound bilinguals) and the group with the smallest number (incipient bilinguals) is only 4.3% for tokens and 4.1% for types. Coordinate bilinguals show an intermediate position between these groups. This short range of variation demonstrates the great similarity in borrowing behavior across speakers with different levels of bilingualism. Less homogeneous are the minimum and maximum percentages per speaker, with a steady increase from incipient to coordinate bilinguals. The fact that compound bilinguals surpass coordinate bilinguals in the amount of linguistic borrowings is not entirely unexpected: both groups are subject to similar sociolinguistic pressures from Spanish, but coordinate bilinguals have a larger number of native lexical choices – because of their higher education – and monitor their speech more closely than compound bilinguals. From this point of view, compound bilinguals are the group most “vulnerable” to borrowing because they
lack the native vocabulary of incipient bilinguals while their proficiency in Spanish is inferior to the performance of coordinate bilinguals. On the other hand, compound bilinguals use codeswitching less frequently than coordinate bilinguals, as shown by the following table. Unlike previous tables, this table was not significant at 0.5% on a chi-square test, which is probably due to the different sizes of the corpora. Still, the data outline a tendency, as explained below.

**Table 10.27 General distribution of codeswitching per level of bilingualism**

<table>
<thead>
<tr>
<th>Quichua</th>
<th>Incipient</th>
<th>Compound</th>
<th>Coordinate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total switches</td>
<td>70</td>
<td>97</td>
<td>249</td>
</tr>
<tr>
<td>Total tokens</td>
<td>249</td>
<td>373</td>
<td>727</td>
</tr>
<tr>
<td>Mean switches</td>
<td>3.6</td>
<td>3.8</td>
<td>2.9</td>
</tr>
<tr>
<td>Switches x speaker</td>
<td>10.0</td>
<td>10.8</td>
<td>62.3</td>
</tr>
<tr>
<td>Tokens x speaker</td>
<td>35.6</td>
<td>41.4</td>
<td>181.8</td>
</tr>
</tbody>
</table>

The data show marked differences in codeswitching behavior. First of all, codeswitching increases from incipient to coordinate bilinguals: 70 switches in the corpus of incipient bilinguals versus 249 switches in the corpus of coordinate bilinguals. Similarly, the number of tokens increases from 249 in incipient bilinguals to 727 in coordinate bilinguals. Because these differences may be largely determined by the different size of the subcorpora, it is recommended to use the average of switches per speaker and the mean length of switches per speaker as a more accurate index. Again, a steady increase is observed in both parameters: coordinate bilinguals switch to Spanish six times more frequently than incipient and compound bilinguals while the length of their switches is five times larger. This means that the differences in codeswitching behavior are much more important than the differences in borrowing behavior. In general, the data feature compound bilinguals as typical ‘borrowers’ and coordinate bilinguals as typical ‘switchers’. The fact that borrowing decreases as bilingualism increases provides some support to the hypothesis that borrowing and codeswitching are in complementary distribution. In any case, other linguistic and sociolinguistic factors not considered here might influence the use of each mixing strategy. The hypothesis must be tested on larger corpora before conclusions could be advanced. Let us now look into the distribution of lexical classes of loanwords in the three groups.
Table 10.28 Loanwords per parts of speech and level of bilingualism

<table>
<thead>
<tr>
<th>Quichua</th>
<th>Incipient</th>
<th>Compound</th>
<th>Coordinate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Tokens</td>
<td>Types</td>
<td>Tokens</td>
</tr>
<tr>
<td>Nouns %</td>
<td>66.6</td>
<td>84.8</td>
<td>55.7</td>
</tr>
<tr>
<td>Verbs %</td>
<td>14.6</td>
<td>17.1</td>
<td>17.3</td>
</tr>
<tr>
<td>Adjectives %</td>
<td>7.6</td>
<td>14.6</td>
<td>9.9</td>
</tr>
<tr>
<td>Adverbs %</td>
<td>0.2</td>
<td>0.4</td>
<td>1.0</td>
</tr>
</tbody>
</table>

The distribution was found to be significant at 0.5% on a chi-square test (cf. Appendices). Except for loan nouns, differences in tokens and types are marginal. In nouns, compound bilinguals stand out for their larger number of types, in accordance with their overall characterization as typical ‘borrowers’. The absence of major differences in this case is due to the fact that the borrowing of items according to lexical classes is determined mainly by the linguistic features of the languages in contact and not by sociolinguistic factors such as the speaker’s level of bilingualism. In these terms, a more revealing yardstick of bilingual performance in borrowing is the usage of loanwords by groups of bilinguals. In previous sections I advanced the hypothesis that the use of loanwords in languages with two lexical classes (verbs and non-verbs) becomes less flexible as one goes from incipient to coordinate bilinguals. That is, the flexible use of loan nouns and adjectives (functional adaptation) changes into a rigid use (functional specialization), thus signaling an incipient typological shift in the borrowing language. Let us see whether this hypothesis is confirmed by the data of the Quichua subcorpora. Table 10.29 below contains the percentages of syntactic functions for each group along with the number of speakers who use loanwords of one class with different functions.

The data confirm the cross-linguistic and cross-dialectal analyses, according to which loan verbs and loan manner adverbs are used only with their prototypical function. The specialized use of loan verbs is not surprising, given that Quichua has a separate lexical class of lexemes for the syntactic slot of heads of predicate phrases. On the contrary, Quichua does not have a specific lexical class of modifiers of predicate phrases, and therefore the specialized use of manner adverbs is not expected in Quichua. The reasons for this use lies on the explicit marking of Spanish manner adverbs with the suffix –mente. This marking inhibits the use of derived manner adverbs in other syntactic positions. More interesting for the relation flexibility-bilingualism are loan nouns and loan adjectives.

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21 The analysis of Quechua and Guaraní dialects show the opposite tendency: the more innovative the dialect, the more flexibly the use of loanwords. It is very likely that the semantics of loanwords play a major role here.
The data confirm that loan nouns are used flexibly by the three groups regardless of their level of bilingualism. There are, however, differences in the degree of flexibility across the groups. In terms of the number of speakers who use loan nouns flexibly, no significant differences are attested. However, if flexibility is considered in terms of the percentage of loan nouns used by each group, a decrease is observed in the direction predicted: loan nouns used as modifiers of referential phrases decrease from 7.57% in incipient bilinguals and 5.91% in compound bilinguals to 2.39% in coordinate bilinguals; also, loan noun used as modifiers of predicate phrases decrease from 4.82% (incipient) and 3.83% (compound) to 0.69% (coordinate). The same decrease is confirmed for types in both syntactic functions. Simultaneously, an increase is observed in loan nouns used in their prototypical slot.

<table>
<thead>
<tr>
<th></th>
<th>Incipient (7 speakers)</th>
<th>Compound (9 speakers)</th>
<th>Coordinate (4 speakers)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Tokens % nsp Tokens % nsp Tokens % Nsp</td>
<td>Tokens % nsp Tokens % Nsp Tokens % Nsp</td>
<td>Tokens % nsp Tokens % Nsp Tokens % Nsp</td>
</tr>
<tr>
<td><strong>N</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HP</td>
<td>86.6 7</td>
<td>90.0 9</td>
<td>95.1 4</td>
</tr>
<tr>
<td>HR</td>
<td>7.6 5</td>
<td>5.9 6</td>
<td>2.4 3</td>
</tr>
<tr>
<td>MP</td>
<td>4.8 5</td>
<td>3.8 7</td>
<td>0.7 2</td>
</tr>
<tr>
<td><strong>V</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HP</td>
<td>100 7</td>
<td>100 9</td>
<td>100 4</td>
</tr>
<tr>
<td><strong>Adj</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HP</td>
<td>2.7 2</td>
<td>3.6 2</td>
<td></td>
</tr>
<tr>
<td>HR</td>
<td>28.7 4</td>
<td>16.5 7</td>
<td>18.3 3</td>
</tr>
<tr>
<td>MR</td>
<td>45.3 7</td>
<td>64.7 9</td>
<td>73.8 4</td>
</tr>
<tr>
<td>MP</td>
<td>22.0 4</td>
<td>15.2 6</td>
<td>8.4 3</td>
</tr>
<tr>
<td><strong>Adv</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MP</td>
<td>100 2</td>
<td>100 8</td>
<td>100 4</td>
</tr>
</tbody>
</table>

The abovementioned tendency recurs in loan adjectives. Focusing on the syntactic function of predicate phrase modifier, we find a ten-percent decrease in flexibility from incipient to coordinate bilinguals. For loan adjectives used as predicate phrase modifiers the decrease in flexibility is still more consistent: a twelve-percent difference in token percentages separates incipient bilinguals (22%) from coordinate
bilinguals (8%). Again, type percentages give closely similar results. Also, the
decrease in flexibility is accompanied by a corresponding increase in the functional
specialization of loan adjectives in their prototypical position.

The foregoing analysis gives support to the view that functional flexibility
of loanwords in flexible languages such as Quichua and Guaraní decreases
proportionately to the increase in the levels of bilingualism of speakers, even if
flexibility continues to be present in the speech of coordinate bilinguals, as
determined by the parts-of-speech system of their language. This demonstrates not
only that typological constraints interplay with sociolinguistic factors such as
speaker bilingualism, but also that typology continues to be operative in situations of
coordinate bilingualism.

Aware of the empirical limitations of the preceding analysis, I do not seek to
provide definitive answers to the question how bilingual performance influences
lexical borrowing. Instead, I have presented and discussed the results of the
subcorpora from three different groups of bilinguals in terms of amount of
borrowing, codeswitching, lexical class and functional flexibility. Further
investigation is necessary to expand the results on the basis of a larger corpus and a
fine-grained classification of bilingualism in relation to lexical and grammatical
categories. In any case, the following preliminary conclusions add value to the
analysis of lexical borrowing in this chapter:

a) The three groups of bilinguals show a similar distribution of Spanish
borrowings, which is taken as evidence of the strong pressure exerted by the
Spanish-speaking society on the Quichua speech community.

b) Compound bilinguals prefer lexical borrowing to codeswitching while
coordinate bilinguals show the opposite preference. Accordingly, compound
bilinguals are characterized as typical ‘borrowers’ and coordinate bilinguals as
typical ‘switchers’.

c) The three groups show similar percentages in the amount of loanwords per
lexical class. Such percentages match those attested for Quichua in general.

d) Flexibility in the use of loanwords is observed throughout all levels of
bilingualism. At the same time, the degree of flexibility decreases
proportionately as bilingualism increases. Both tendencies comply with the
expected hypotheses of functional adaptation of loanwords and the relation
between flexibility and bilingualism.

Table 10.30 summarizes these findings by correlating level of bilingualism, amount
of Spanish borrowing, mean switches per speaker, and degree of flexibility. 22

22 Flexibility was calculated by deducting the percentage of non-prototypical uses from that of
prototypical uses for nouns and adjectives, and then calculating the inverse average of the
resulting percentages.
Table 10.30 Borrowing, codeswitching and flexibility per levels of bilingualism

<table>
<thead>
<tr>
<th>Category</th>
<th>Incipient</th>
<th>Compound</th>
<th>Coordinate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spanish borrowing (%)</td>
<td>18.2</td>
<td>22.5</td>
<td>20.1</td>
</tr>
<tr>
<td>Switches per speaker</td>
<td>10.0</td>
<td>10.8</td>
<td>62.3</td>
</tr>
<tr>
<td>Flexibility (%)</td>
<td>65.6</td>
<td>43.35</td>
<td>30.45</td>
</tr>
</tbody>
</table>

10.7. Summary

This chapter analyzed lexical borrowing from different perspectives: the overall contribution of lexical borrowing; the relation between lexical borrowing and codeswitching; the classification of loanwords in lexical classes; the use of loanwords in typical and non-typical syntactic positions; the distribution of borrowing across dialects; and the influence of bilingualism on the borrowing outcomes. The discussion of lexical borrowing was contextualized by the theoretical framework of the theory of parts of speech and several borrowing hypotheses previously formulated. The following summary is an overview of results. For the sake of clarity, the findings are summarized according to the borrowing hypotheses discussed in Chapter 4, postponing hypotheses 1 and 2 until grammatical borrowing is analyzed in the following chapter.

Borrowing hypotheses from the Scales of Borrowability

H3. Lexical elements > grammatical elements. This prediction is confirmed only for Quichua and Guaraní, in which lexical borrowing clearly surpasses grammatical borrowing. In Otomí, grammatical elements are slightly more numerous than lexical ones.23 I interpreted this distribution as evidence of typological constraints on linguistic borrowing, but also as evidence of ongoing typological changes in Otomí as a result of contact.

H3.1. Open class > Half-open class > Closed class. Assuming equivalence between open class and lexical class, on the one hand, and closed class and grammatical class, on the other, the borrowing frequency holds only for Quichua and Guaraní. A more accurate evaluation of this hypothesis shall await the results of grammatical borrowing Chapter 11.

H3.2. Noun > Verb > Adjective > Adverb. This borrowing hierarchy is confirmed for the three languages provided the category ‘adverb’ includes only manner

23 The higher frequency of grammatical elements is maintained only if prepositions are considered grammatical. It is not unlikely, however, that prepositions are perceived as lexical items by incipient bilinguals.
adverbs. On the contrary, if all subclasses of adverbs are considered, the prediction is confirmed only for Quichua and Guaraní, but not for Otomí, in which loan adverbs are more numerous than loan adjectives and as frequent as loan verbs.

**Borrowing hypotheses from the Parts-of-Speech Theory**

H4. Contiguous borrowing hypothesis. The contiguity of the lexical classes in the borrowing process is confirmed for the three languages, because none of them borrow one lexical class without borrowing the lexical classes located previously on the hierarchy.

H4.1. Verbs > Nouns > Adjectives > Manner Adverbs. This borrowing hierarchy is disconfirmed in two ways: loan verbs rank second after nouns in the three languages; and loan manner adverbs are more numerous than loan adjectives in Otomí.

H4.2. Borrowing of previous lexical classes. The hypothesis is confirmed for the three languages. Additional evidence is that borrowed modifiers (adjectives and manner adverbs) often occur with borrowed heads (nouns and verbs) in the three languages.

H4.3. Borrowing of lexical class immediately following the last differentiated class attested in the recipient’s system. The hypothesis is confirmed for Quichua and Guaraní, because both languages borrow nouns preferentially and the last differentiated class attested in their systems is verbs. The hypothesis finds no confirmation for Otomí, because this language borrows adjectives only marginally (1.9%). However, the larger number of loan nouns in Guaraní and Quichua is not necessarily explained in this way: noun borrowing is deeply motivated by non-typological factors of discursive and pragmatic nature.

H.5. Functional adaptation. The hypothesis is confirmed for the three languages in different ways. The first piece of evidence of functional adaptation is the use of loan verbs exclusively as heads of referential phrases in the three languages, all of which have a separate lexical class for this syntactic position. The second proof of this hypothesis is the flexibility in the use of loanwords in Quichua and Guaraní, even though the latter languages shows only a limited use of lexical classes in syntactic positions other than prototypical. The third proof consists in the rigidity of Otomí in the use of loanwords. In addition, there is evidence from Quichua that functional adaptation in general and flexibility in particular decreases gradually as levels of bilingualism increase. Adjectives proved the most flexible of all lexical classes. Nouns show a lower degree of flexibility. Finally, manner adverbs show the same rigid use as verbs.
H.6. Functional specialization. The first proof comes from Otomí. This language uses adjectives and adverbs primarily with the function they have in the source language: modifiers of referential phrases and modifier of predicate phrases, respectively. Another proof is the predominant use of adjectives as referential phrase modifiers in Guaraní.

H.7. Lexicalization hypothesis. According to H.6, evidence for the creation of novel lexical classes comes from Otomí, where loan adjectives and loan adverbs make two classes previously unattested in the language. Lexicalization implies a typological change in Otomí, in which massive grammatical borrowing also occurs.