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In this contribution, we explore two hypotheses with respect to clause combining. The first one is the assumption that languages with a mainly spoken tradition explicitly code clause relations, both coordination and subordination, to a lesser extent than languages with a long written tradition. And secondly, in case of contact between two such languages, with the latter one in a dominant position, and a sufficient level of bilingualism, we expect the former to borrow both types of relators, and increase the amount of explicit coding. We will investigate our hypotheses on the basis of Otomi, a native language from Mexico, and Spanish, the colonial language which became the official language of that country after its independence.

1. Introduction

A typical feature of spoken discourse, especially in informal face-to-face communication, is that a lot of information may be left implicit precisely because it is shared by the interlocutors. One of the potential areas of underrepresentation is the relation between constituents at the phrase and the clause level, typically expressed in writing via adpositions, coordinators and subordinators. In formal interaction, and even more so in written varieties of language, such frugality may create ambiguity, or a general lack of clarity. As a consequence, prescriptive grammars, employed for writing, or speaking ‘properly’, will formalize sentence structure into grammatically complete entities, with relations at the different levels expressed explicitly. In language communities where writing, and formal education, have been wide-spread for a number of generations, it is inevitable that some influence of such prescriptive grammars will be noticeable in the spoken language as well. This may then lead to a higher overall frequency of relation markers in speech, and to the extension and (further) grammaticalization of the set of elements that mark such relations.

In this article, we seek to give support to the above hypothesis on the basis of a comparison of the grammars and spoken corpora of two languages. The first language is Otomi, from Mexico, which has virtually no written tradition. Its major use, over a number of generations, has been in informal speech situations, within relatively small communities. Our second language, Spanish, on the other hand, is a world language, with a longstanding written tradition. As the official language of over twenty countries, it plays a central role in the education system of these countries, one of them being Mexico. Given the role of Spanish in the Mexican reality, virtually all of today’s speakers of Otomi are bilingual at least to some extent, especially the younger generations. As almost predictable in situations of intensive language contact, this has led to borrowing at different linguistic levels. Spanish being clearly in the dominant position, this has mainly been a unidirectional process. Indeed, in earlier publications we have shown that Otomi borrows considerably from Spanish, both at the lexical and the grammatical levels, though less than some other languages, such as Ecuadorian Quechua (Quichua) and Paraguayan Guarani (cf. Bakker et al. 2008).

A further hypothesis that we would like to explore therefore is related to this transfer of linguistic material from one language to another. Provided that our first hypothesis about the

relative underrepresentation of relations between clauses in Otomi holds, we will test whether borrowing might have contributed to an increase in the explicit clause marking in this language. This may be evident from the borrowing of Spanish markers, additional to native elements. And it may also appear, in a more hidden fashion from a higher frequency in the use of the native markers than in earlier stages of the language. Finally, the borrowing of clause markers and other relators may have had an influence on the grammatical system of the target language, in the sense of strengthening existing structures, or even introducing new ones.

With respect to borrowing we would like to make some observations in advance of the discussion below. ‘Borrow’ and ‘loan’ as metaphors for the transfer, from two different perspectives, by speakers of elements from one language to another, both suggest that material is integrally, and possibly only temporarily taken over from a source language by the target language, without ever becoming part of the latter. We will follow Johanson (2002) in assuming that such a process in fact hardly ever takes place without the element or structure in question being adapted to the target language, not just in shape but also in meaning and function. It will be molded and integrated further in the transfer to and consecutive processing by later generations, who may no longer be conscious of its origin. Therefore, in our treatment of Spanish elements borrowed by Otomi, we will not only be interested in their original features, such as the part of speech in the source language, but also in the role they play in their new environment, which may be different as we shall see. Another point is that we think that studying the borrowing of functional elements such as coordinators, subordinators and adpositions is in many respects linguistically much more interesting than that of nouns and some other lexical elements, since by their sheer nature, they often imply the borrowing of both ‘matter’ and ‘pattern’, in the sense of Matras and Sakel (2007).

In the rest of the text we will proceed as follows. In section two we will say a bit more about the two languages, their recent history, and the grammatical means by which relations between constituents are expressed. We will restrict ourselves mainly to relations between clauses, and look at strategies for coordination and subordination. Then, in section three, we will first discuss borrowing from Spanish to Otomi in general, and then look more specifically at the effects of borrowing for coordination and subordination. In section four we will discuss some questions related to the nature of the borrowing process. Finally, in section five we will revisit our hypotheses, and see to what extent they hold for the language pair under scrutiny.

2. The Languages and Their Grammars on Coordination and Subordination

The two languages that are the subject of our investigation are different in many respects, but have a partially overlapping history that goes down some 500 years. Otomi is a language from Central Mexico, with around 250.000 speakers to date. This makes it the 7th largest indigenous language of the country, after Nahuatl, Zapotec, Mixtec and several Mayan languages.¹ Otomi belongs to the Otopame branch of the Otomanguan family, with some 175 extant languages the largest language family in the Americas. Mixtec and Zapotec belong to other branches of the

¹According to figures of the Mexican 2005 census by the Instituto Nacional de Lenguas Indígenas (<http://www.inali.gob.mx/>), and the Instituto Nacional de Estadística y Geografía (<http://www.inegi.org.mx/>). From the linguistic perspective this is, of course, a considerable generalization. There are a large number of dialects among the languages mentioned, which may or may not be mutually understandable, and de facto individual languages. E.g. the Ethnologue (Lewis 2009) gives 57 Zapotec and 52 Mixtec languages their own unique codes. Otomi is represented with nine varieties.

same family. In pre-Columbian times the predecessors of the Otomis reigned over the Mexican highlands for a long time, but around 1000 AD they were subjugated by the Aztecs, speakers of the Nahuatl language. When the Spaniards arrived around 1500, many Otomis joined forces with them in their battle against the Aztecs. As a result they regained part of their territory. In the colonial era the Otomis were obvious candidates for conversion to Catholicism. Missionaries such as Urbano (1605) studied their language, and translated religious texts into Otomi. But the independence of Mexico in 1813 saw the promotion of Spanish to the position of national language, and the loss of any status the indigenous languages might have had in the society before. Living in remote areas, and in relative isolation, the mainly monolingual Otomis could keep their language in a more or less pure state until around 1950. From then onwards, however, the construction of roads, and the growing influence of the media and of education have brought the two realities closer together, resulting in more language contact, bilingualism, and language change.

While Otomi turned from a language with areal dominance into a very local one, Spanish did the opposite. In the times of the European Middle Ages, when Otomi thrived, Spanish was a regional language with relatively low status. There was only a spoken, not a written variety. For ‘higher’ purposes, its ancestor language Latin was the norm. However, during the ‘Reconquista’, the centuries long conquest of the peninsula from the invaders from North Africa, Spanish became more and more dominant. It became the national language after the expulsion of the non-Christians around 1490, and the unification of Spain under the Catholic Monarchs. Immediately after this the European conquest of America started, which would turn Spanish into one of the world languages, with over 320 million first and 60 million second language speakers in over 30 countries. In Mexico, Spanish is the official language, with over 100 million monolinguals (cf. Lewis 2009), and with the majority of the six to eight million speakers of indigenous languages bilingual at least to some extent.

Not only are the history and the current status of the two languages different, so are their grammatical systems. We will give characterizations of these in terms of some major typological parameters, and the way both languages deal with coordination and subordination.

Following the pattern of the Otomanguan languages, classical Otomi is a VOS language, with SVO as a marked alternative (Suárez 1983; Yasugi 1995). There is a small set of particles that mark objects of comparison, instrument, cause, manner, and spatial orientation. These particles occupy a prenominal position, and may be interpreted as diachronic forerunners of prepositions (Hekking and Andrés de Jesús *fc*). Dryer (2005) classifies Otomi as ‘weak prefixing’. There are only a few verbal affixes, mainly for the marking of several types of objects. Most of the further verbal marking – e.g. for tense, aspect, person, number and clusivity – takes place via proclitics and enclitics. There is no case marking. Otomi has a tonal system with a three-way distinction. With respect to coordination, there are several particles which monosyndetically mark the relations usually distinguished for this function.² They are shown in Table 1.

²Here and below, when discussing coordination, we will try to stay close to the terminology proposed by Haspelmath (2004).

FUNCTION	FORM IN OTOMI	FORM IN SPANISH	ENGLISH TRANSLATION
CONJUNCTION	<i>ne; 'nehe</i>	<i>y/e; además</i>	<i>and; also</i>
DISJUNCTION	<i>wa</i>	<i>o/u</i>	<i>or</i>
ADVERSATIVE		<i>pero; sino</i>	<i>but</i>
NEGATION		<i>ni</i>	<i>nor</i>

Table 1: Coordinators in Otomi and Spanish

Thus, Otomi has markers for two of the three generally acknowledged types of coordination – Conjunction (CONJ) and Disjunction (DISJ) - but not for the third one, Adversative (ADVRS). The absence of the latter is not uncommon. In some languages there is just one marker to express both conjunction and adversative. The particle *mwâ* ‘and/but’ in the Oceanic language Tinrin is a case in point (cf. Osumi 1995:258). And if an adversative marker is present, it might be used only infrequently. Stilo (2004:302) estimates that, although the Western Iranian language Gurchani has an adversative marker, this relation is left asyndetic by speakers in almost 90% of the relevant contexts. And although the markers mentioned in Table 1 are used with some regularity, many instances of coordination remain unmarked in spoken discourse also in Otomi. The utterances in (1) below, both stemming from the corpus that we will introduce in more detail in the next section, exemplify this. While (1a) has a marker, (1b) has not.

(1a) Ar Pedro pe:ts'i 'nar nguu nu Maxei
 DEF.SG Peter have INDEF.SG house DEIC Querétaro

'**nehe** pe:ts'i 'nar nguu unu M'onda.
and have INDEF.SG house DEIC Mexico City
 ‘Pedro has a house in Querétaro and also one in Mexico City.’

(1b) Ya goxthi ya zaa wa ya bo:jä
 DEF.PL door DEF.PL wood or DEF.PL metal

tx'u:tho ya 'nandi pe:ts'i ya nhñe.
 few DEF.PL time have DEF.PL glass
 ‘The doors are made of wood or metal (and) not often contain glass.’

The same phenomenon can be observed quite frequently for the other types of coordination. Finally, there is no marker for negative coordination ‘nor’, ‘and not’, which does occur in other languages. In the latter case there will only be the general negative adverbial *hingi* ‘not’.

The list of subordinators in Otomi is a very short one. It covers only a small part of the relations that are potentially distinguished for subordination. The existing markers can be found in Table 2 below. For this purpose, we will use the categorization employed by Cristofaro (2003:155f). She selects six classes from the adverbial relations proposed by Kortmann (1997), and by Dixon and Aikhenvald (2009), three temporal and three modal ones. We give them under (2), with the abbreviations that we will use further on, and some English examples.

- (2) Contemporality (CNTMP) *when; while*
 Posteriority (POST) *before*
 Anteriority (ANT) *after*
 Condition and Concession (COND) *if; although*
 Reason and Manner (REAS) *because; as if*
 Result and Purpose (RESL) *in order to*

Only three of these categories are expressed by a subordinator in Otomi, by way of in total just four elements. When used, they occupy the first position of the clause that they are part of.

FUNCTION	FORM IN OTOMI	FORM IN SPANISH	ENGLISH TRANSLATION
CNTMP	<i>(nu)'bu:</i>	<i>cuando; mientras</i>	<i>when; while</i>
POST	<i>'be:tho</i>	<i>antes (de) que</i>	<i>before</i>
ANT		<i>después (de) que</i>	<i>after</i>
COND		<i>si; aunque</i>	<i>if; although</i>
REAS	<i>ngetho; ngu</i>	<i>porque; como</i>	<i>because</i>
RESL		<i>para que</i>	<i>in order to</i>

Table 2: Subordinators in Otomi and Spanish

This state of affairs implies that many relations that are explicitly marked by a subordinator in other languages will have to be inferred by the hearer in (classical) Otomi. And even for the cases where a marker does exist, it is often left out in discourse, as example (3b) shows. In the examples that follow, loanwords from Spanish are in italics.

- (3a) Ar bäs̄si bi nzoni **ngetho** *pos* bi zät'i.
 DEF.SG child PST.3 cry because well PST.3 burn
 'The child cries because it burned itself.'

- (3b) Ar bäs̄si bi nzoni bi n-tsät'i nts'e:di-tho.
 DEF.SG child PST.3 cry PST.3 REFL-burn strong-LIM
 'The child cries, it burned itself heavily.'

Otomi does not have a 'neutral' marker of subordination of the type of *that* in English, or *que* in Spanish. In the absence of one of the markers mentioned in Table 2, the only other way in which Otomi subordinate clauses are distinct from main clauses is the occurrence of certain tense markers, which code person plus Contemporality, Posteriority or Anteriority, and cliticize to the verb. Some of these can also appear in main clauses, be it with tonal differences. The fact that there are several independent and bound markers that are unique to certain clauses is enough reason for us to assume that the Otomi grammar does distinguish between the coordination and subordination of clauses. However, all these markers are optional, and with none of them present, there are no further morphosyntactic clues to determine the semantic or syntactic relationship between two clauses other than through inference, and possibly constituent order.

Spanish has the typical features of a Romance, or Indo-European, language from Western Europe. It has basic SVO main clause order, with OVS, VOS and VSO as alternatives. The latter orders are all relatively infrequent (Clements 2006:119; Ocampo 1995:428). Spanish is a prepositional language, with an inventory of around 45 prepositions. Dryer (2005) classifies the

language morphologically as ‘strongly suffixing’. Verbal inflectional suffixes code person, number, tense, aspect and mood. There is no case marking. As for coordination, Spanish has the complete inventory of markers, including Negation (NEG). All forms are very common in both written and spoken varieties. In Table 1, *e* and *u* are phonologically conditioned allomorphs of *y* ‘and’ and *o* ‘or’, respectively.

For subordination, apart from neutral marker *que* ‘that’, Spanish boasts a large number of adverbials, estimated over 40, that combine the function of marking subordination with expressing one of the six relations mentioned above, or a shade of them. They often consist of a combination of one or even two prepositions plus the neutral marker *que*, which syntactically behaves like a lexical unit, although this is not always reflected in the spelling. The fact that these are synchronically still analyzable, both formally and semantically, is indicative of their none too long historic trajectory. Some of the more frequently used subordinators are presented in Table 2.

For now, we may conclude that Otomi has a considerably smaller inventory for the expression of both coordinating and subordinating relations than Spanish, which seems to have a very complete set of markers of both types. This is, however very much a description of the language systems in a more abstract sense. In the next section we will see whether contact with Spanish, and the resulting bilingualism, has had any influence on the actual communicative behaviour of the Otomi speakers in this respect.

3. Borrowing Coordinators and Subordinators

For this exercise we will employ the data in a corpus that we collected some time ago, and that has been used for several other investigations (cf. Hekking and Bakker 2007, 2009; Bakker and Hekking 2010). This corpus contains around 112,000 tokens of spontaneous Otomi discourse. A total of 57 native speakers have made a contribution to it. These stem from different groups in terms of gender, age, level of education, and professional background. All contributors have some knowledge of Spanish, but their proficiencies differ strongly, from marginal to complete bilingualism. As a result of contact with Spanish, and the different roles of the two languages in Mexican society, quite a lot of borrowing has taken place, especially over the last 50 to 60 years. The traces of this are found in the contributions of all speakers. In all, 14.4% of the tokens in the corpus are Spanish loans. The minimum that we found for an individual contribution was 8.7%, and the maximum a staggering 23.7%.

When we look at the borrowed lexical items in terms of their parts of speech in Spanish, and their use in the Otomi context, we find the following intriguing distribution.³ We restrict ourselves to the parts of speech that represent at least 1% of the total number of borrowed tokens.

³In our corpus annotations we distinguish between the part of speech of a borrowed word in the original language and its actual function in the context of the receiving language, which is not necessarily the same. E.g. Otomi speakers borrow Spanish adjectives and employ them for both predication and modification, while the category as such does not exist for the native Otomi lexicon (cf. Bakker and Hekking 2010). We will come back to this distinction in more detail below.

RANK	PART OF SPEECH (SPANISH)	TOKENS (% OF TOTAL BORROWED)
1	Noun (N)	6,463 (40.1%)
2	Preposition (PREP)	3,614 (22.4%)
3	Coordinator (CO)	1,187 (7.4%)
4	Discourse marker (DisM)	1,046 (6.5%)
5	Subordinator (SUB)	839 (5.2%)
6	Verb (V)	765 (4.8%)
7	Adverb (ADV)	577 (3.8%)
8	Toponym (TOPN)	445 (2.8%)
9	Adjective (ADJ)	164 (1.0%)
	Other	1,184 (7.3%)
	TOTAL	16,122

Table 3: Borrowings from Spanish according to part of speech

As usual, nouns form the largest category. Next in line, however, are prepositions, with a remarkable 22.4%. All informants use at least a few of them. These are followed by three other grammatical categories, coordinators, discourse markers and subordinators.⁴ These four grammatical categories together make up for 41.5% of the total number of borrowed tokens. The next lexical category, verbs are only in sixth place, with a mere 4.8% of the tokens. This is enough reason to assume that something interesting might be going on with respect to the coding of coordination and subordination in Otomi. We will discuss the details for both categories in two separate subsections.

3.1 Borrowing coordinators

As discussed in section 2, Otomi has markers for conjunction and disjunction, though not for adversative and negative coordination. The first two are quite frequently used by all informants, but so are the coordinators that have been borrowed from Spanish, including those for the two categories that are missing from classical Otomi. Table 4 contains the figures. In brackets we give the percentage of the 59 informants that used the corresponding forms. Since in our representations we tried to stay as close as possible to the actual pronunciations, the Spanish forms appear in different guises in the database. In the table we use the most frequent forms, but the totals are over all varieties that we found.

FUNCTION	OTOMI		SPANISH (BORROWED)		TOTAL
	FORM	TOK (%INF)	FORM	TOK (%INF)	TOKENS
CONJ	<i>ne; 'nehe</i>	1757 (100%)	<i>i</i>	220 (66%)	1977
DISJ	<i>wa</i>	156 (78%)	<i>o; osea</i>	213 (59%)	369
ADVRS	-		<i>pero; pe</i>	362 (100%)	362
NEG	-		<i>nixi; ni</i>	392 (100%)	392
TOTAL		1,913		1,187	3100

Table 4: Otomi and Spanish coordinators in the corpus

⁴The same prominent place for discourse markers among the borrowings from Spanish was found for Tojolabal Maya by Brody (1987).

Thus, all Otomi speakers use borrowed markers for the two coordinating functions for which the classical language does not have a specific element: the Adversative (average 6.1 times per informant) and the Negative (6.6). Given this spread and frequency, and the phonologically adapted shapes, they could be seen as an extension of the native vocabulary. The use of *pero* ‘but’ is so regular that many speakers abbreviate it to the first, stressed syllable *pe*, which does not happen in Spanish.⁵ Borrowing an adversative marker has been observed for other language pairs, such as the clause initial marker *amma* from Arabic in Dargi and other Caucasian languages, mentioned in Van den Berg (2004:204) and Jeschull (2004:262), and in three western Iranian languages, Vafsi, Persian and Gilaki, mentioned in Stilo (2004: 272).

In the online database of the Loanword Typology Project (Haspelmath and Tadmor 2009) we found that 16 out of 41 languages (39%) have borrowed a disjunction marker from another language, and that of these only Ket and Otomi have a native marker as well. We also found that 11 languages (27%) have borrowed conjunction markers, while only Indonesian, Ket, Manange, Otomi and Tarafiyt Berber also have a marker of their own.⁶

Since Otomi borrows CONJ, DISJ and ADVRS, it adheres to the borrowing hierarchy proposed by Matras (2009), which predicts that borrowing a CONJ marker implies that a DISJ marker will be borrowed, and the presence of a loan for the DISJ marker that an ADVRS marker will be borrowed.

Thus, despite the presence of native markers for ‘and’ and ‘or’, speakers nevertheless employ the equivalent Spanish forms as well. In the case of *o* ‘or’ even more frequently in terms of tokens than native *wa*.⁷ Of the 59 informants, 18 use only the Otomi form, 7 use only the Spanish form, and 28 use both. Six informants did not use a disjunction at all in their contributions. In 29 utterances - 26 conjunctions and 3 disjunctions - both markers are present at the same time, with always the Spanish form in the canonical first position of the clause, directly followed by the Otomi form. In all, we found examples of this code doubling – in fact a form of polysyndesis - for nine of our informants. One of them used the combination *i ne* ‘and’ no less than 18 times, apart from 20 times *ne* and 43 times *i* in isolation. We give an example of both types of doubling in (4) and (5) below. The three-letter code between rectangular brackets indicates the informant. Note that example (5) also contains an occurrence of Spanish *pero* ‘but’.

- (4) Ar t'u:lo bātsi bí nzoni *porke* bí zāt'i
 DEF little boy PST3 cry *because* PST3 burn

i ne bí *lastimā* na ndunthi. [TDP]
and and PST3 *hurt* very much
 ‘The little boy cried because he burnt and hurt himself very much’

- (5) Xta o:-he hmä enä 'bu:'-är bohä x
 PRF1 hear-PL.EXCL say tell be-DEF.SG money

⁵Another indication for the familiarity of this form is that several of the native speakers that assisted us in annotating the corpus did not code *pe* as a loanword at all.

⁶We do not know to what extent earlier native markers might have been replaced by loanwords in the other cases.

⁷In around 10% of the DISJ borrowings it concerns in fact the expression *o sea*, which in Spanish would translate into something like ‘in other words’, but seems to be used as a simple ‘or’ in the Otomi contexts.

Ya xta o:-he-r *kwento*= 'ä
already PRF1 hear-PL.EXCL-DEF.SG story=EMPH.SG3

pero hin-di pä-he xu ge-r
but NEG-PRS1 know-PL.EXCL what? COP-DEF.SG

syerto= a o wa hi'nä. [REG]

true=EMPH.SG3 or or not

'We have heard how people tell that there is money, we have already heard the story, but we don't know whether it is true or not'

On the face of it, we can of course not be sure whether the borrowed CONJ and DISJ markers just replace native elements in their contexts and do not in fact increase the text frequencies of explicit coordination, or whether they are really 'extra'. We will come back to this point in section 4. Suffice it here to observe that the borrowed elements account for 11% of the conjunctions, 58% of the disjunctions, and of course all of the adversatives and negatives, making up some 38% of all explicitly marked coordinations.

In order to get an impression of the absolute frequency of explicit coordination in Otomi, we calculated the frequency of the respective categories per 1000 words of corpus text. We compared that figure with the corresponding frequencies in the subsection 20th century spoken Spanish in the corpus of Davies (2002). The results are presented in Table 5.⁸

CATEGORY	OTOMI	BORROWED	TOTAL	CORPUS DAVIES
CONJ	15.7	2.0	17.7	22.2
DISJ	1.4	1.9	3.3	4.9
ADVRS	-	3.2	3.2	5.5
NEG	-	2.2	2.2	1.0
TOTAL	17.1	9.3	26.4	33.6

Table 5: Occurrence of coordinators per 1000 words

If it were a matter of the native elements alone, then the Otomi texts mark coordination not more than half the time the Spanish texts do. The borrowings bring the total number of marked coordinations closer to the Spanish total, but they cover only half of the difference. As could be expected, we observed a considerable number of asyndetic clause pairs in the Otomi corpus. The increase in marked pairs is mainly due to the 'new' ADVRS and NEG categories. The latter, marked by Spanish *ni*, is apparently quite attractive, and even more frequent as a loan than in its source language. The explanation for this is probably that it often translates into contrastive 'but not', while in Spanish it is purely the parallel 'nor', 'and also not'. As such it is an addition to the ADVRS as well as the NEG category. The other categories, however end up with rather lower totals than those for the Spanish corpus. If we make a maximum loan assumption, i.e. that all borrowings are an extension, then the Spanish corpus would have around the double amount of

⁸Obviously, a measure based on mean clause or sentence length would have been more precise. Since we do not have that information available for the Spanish corpus, we will assume that the potential differences will not affect our conclusions in a fundamental sense.

syndetic coordination of a ‘pure’ Otomi text. But even if we assume that only ADVRS and NEG are real extensions, and that all CONJ and DISJ loans replace what would have been an occurrence of a native marker in ‘pure’ Otomi, we would still have a low 21.0 per 1000 tokens for classical Otomi versus 33.5 for Spanish. The other borrowings bring this figure up to a total of 26.4, still more than 20% lower than in Spanish spontaneous speech. The high frequency of the borrowed coordinators and the fact that such a large proportion of the informants use them, convince us that these Spanish forms have become part of the Otomi lexicon. Since explicit coordination was part of the classical language, this has not led to any structural change, just the strengthening of an existing construction, and the extension of the range of coded semantic relations under coordination.

3.2 Borrowing subordinators

With only four markers that combine the function of subordinator with some semantic category, for only three out of the six classes distinguished by Cristofaro (2003), Otomi definitely lags behind Spanish, which has a large number of representatives expressing different shades of all six classes. In light of the borrowings in the coordination section, this creates expectations for subordination as well. And these expectations are certainly met. We found a large amount of borrowed subordinators in the corpus, exclusively used in their prototypical function of marking subordination, and always in the leftmost position of the clause that they mark. Furthermore, among the 3614 Spanish prepositions that we found, no less than 963, or 27%, function as subordinators in the Otomi context, rather than as relators of a noun phrase. This finds a probable explanation in the fact that many Spanish subordinators are compounds based on a preposition plus the general subordination marker *que* ‘that’. Examples are *desde que* ‘since’, *después de que* ‘after’, *para que* ‘in order to’, *porque* ‘because’, and *sin que* ‘without’. The corresponding prepositions are typically very frequent in their own right, and as such often borrowed by Otomi. This may make the compound subordinators synchronically analyzable, even for non-native speakers of Spanish. Spanish subordinators, like the Otomi ones, occupy the first position of their clause. They are therefore phonologically and pragmatically conspicuous, and often used as turn holders in conversation. Furthermore, the *que* marker is always unstressed. Alternatively, prepositions like *para* and *por* in Spanish frequently introduce phrases headed by an infinitive verb form. These are noun phrases in the strictly syntactic sense, but are functionally equivalent to subordinate clauses introduced by the corresponding subordinator. From the perspective of a non-native speaker of Spanish the formal differences between the two structures may not be altogether clear. Compare example (6a), which contains a subordinate clause introduced by *para que* with the verb in a finite subjunctive form, with example (6b), which starts with the preposition *para* followed by an infinitive.

(6a) Hay que tener mucho cuidado *para que no se destruyan* cosas.
 ‘One should be very careful in order not to destroy things.’

(6b) *Para bailar* La Bamba se necesita una poca de gracia.
 ‘In order to dance La Bamba some elegance is needed.’
 (Mexican popular song)

For the occurrences of *para que* and *para* in the Otomi corpus we found no correlation with finiteness.

In table 6, we give the categories and the frequencies for the subordinators that we found in our corpus. The Spanish borrowings have been split into those that had the full subordinator form, including the *-ke* marker, on the one hand (under Sub), and the single prepositions that we found in the position of a subordinator on the other hand (under Prep).

FUNCTION	OTOMI	SPANISH			TOTAL
	TOK (%INF)	SUB	PREP	SUB + PREP	TOKENS
CNTMP	365 (90%)	122	0	122 (89%)	487 (100%)
POST	21 (27%)	17	68	85 (89%)	106 (93%)
ANT	-	0	90	90 (92%)	90 (92%)
COND	-	6	0	6 (10%)	6 (10%)
REAS	76 (90%)	461	13	474 (100%)	550 (100%)
RESL	-	19	781	800 (98%)	800 (98%)
SUBTOTAL	462	625	952	1577	2039
NEUTRAL	-	208			208 (86%)
TOTAL	462	833	952	1785	2247

Table 6: Otomi and Spanish subordinators in the corpus

The figures in the subtotal row make it immediately clear that there is a large amount of borrowing of subordinators going on. Of the total of 2039 cases of syndetic subordination in the corpus over three quarters (77%) is marked by way of a loan subordinator. This number increases even to 79% when we include the neutral subordinator *ke*, derived from Spanish *que*.⁹

Here, three categories are completely new to Otomi. The most frequent one, and surpassing all other categories is Result, for which we find *pake* < Sp. *para que* ‘in order to’, and in the overwhelming majority of the cases *pa* < *para* ‘for’. Second is Anteriority, expressed by forms based on the preposition *desde* ‘from’. This is never followed by *ke* < *que* while in Spanish it always is in finite sentences. Third comes Condition, for which we find unmodified *si* ‘if’. Without the loan subordinator these relations would have remained completely implicit, although they might of course have been made explicit by non-grammatical means, such as an adverb or an adverbial expression. The two clauses would then be juxtaposed asyndetically, and both would be of equal, i.e. main clause status. The RESL and ANT markers are used by virtually all speakers. We will therefore consider them to be part of the Otomi system. Since Otomi does have subordinate clauses, and the borrowed subordinators occupy the first position of their clause just like the native ones, we will assume that clauses with the Spanish loan are indeed subordinate. Only the conditional is quite infrequent, and used by just 10% of the speakers. An explanation for this may be the fact that native *nu’bu*: ‘when’ may be used with a flavour of conditionality, not uncommon in other languages. However, as we have already seen in section

⁹The figures do not include the proclitic tense markers. As briefly discussed in section two, Otomi has proclitic tense markers, which are optional in subordinate clauses. Some of these clitics occur only in subordinate clauses, and therefore could be seen as markers of CNTMP, POST and ANT, respectively. Many of them, however are only unique when tone is taken into consideration, which has not been coded in our corpus. It is not clear to us whether this would make them functionally equivalent to a subordinator in clause-initial position. Therefore, we will leave them out of consideration for now. A more comprehensive treatment than we have space for here, however, should include them in some way or other.

3.1, the existence of a native marker is no obstacle to the borrowing, or even parallel use of an element with more or less the same function.

The three other categories, for which Otomi does have a marker, have their inventory extended by loans. Firstly, Posteriority, for which the native marker occurs quite infrequently in the corpus, gets a backup via two Spanish forms, *antes (de que)* ‘before’ and *hasta (que)* ‘until’. While the Otomi form is used by only around a quarter of the speakers, the loan forms are used by an overwhelming majority of 89%, with two informants using exclusively the loan forms. The second category that sees its inventory replenished by loans is Contemporaneity. In this case, the native marker is used very frequently: it makes up for around 80% of the total use of native subordinators. Almost all speakers have used it, either its long form (*nu'bu:*) or its short form (*'bu:*), and typically both. Still, the majority of them also employ two forms derived from Spanish subordinators that express the same relation: *cuando* ‘when’, and *mientras* ‘while’. These forms are not related to prepositions. Five speakers did not use the native form at all, only the borrowed ones. The two native markers for the final category, Reason, are not very frequent, though they are used by virtually all speakers. Nevertheless, the total for this category is boosted by six times as many borrowings, used by all speakers, and derived from four Spanish forms: *aunque* ‘although’, and *como, mas que, porque* ‘because’. It is not clear to us why, with two forms available in the language for this meaning, especially *como* (245 times) and *porque* (163 times) are so in demand.

We have seen that, as a result of these borrowings, three new categories of explicit subordination have been added to the language, plus the neutral category, while the inventory for the three existing categories has been expanded with several new forms. Two categories of subordination are represented in the borrowing list of Haspelmath and Tadmor (2009), REAS and COND. No less than 14 out of the 41 languages borrowed a form for ‘because’, four of them borrowing Spanish *porque*. And for ‘if’ there are seven clear cases – two of them Spanish *si* - and two uncertain ones. Thus, it is definitely not uncommon to borrow these subordinators.

Just as with coordination, we found several types of code doubling. Of the 1577 instances of loan subordinators 49 were followed by an Otomi subordinator. We found 30 out of the 243 instances (12%) of REAS marker *komo* ‘because’ followed by the Otomi REAS marker *ngu*, which appears to be cliticized to it, in fact forming one unit. We also found five cases of code doubling for the other frequently borrowed REAS marker, *porke* < *porque*, produced by five different informants. Interestingly, however, in all these cases it was followed by Otomi (*nu*)’*bu:* ‘when’ rather than by *ngu* ‘because’. We found that same marker after a total of 12 instances of markers for all six categories, and twice with neutral *ke*. We think that this is related to the semantic vagueness of (*nu*)’*bu:*. Some examples are given in (7).

- (7a) Nä'ä-r ots'i ñux-ar dehe
 DEIC-DEF.SG hole fill-DEF.SG water
- komo=ngu*** **'bu:** mi that'-ar däthe. (RAP)
 as=because when PST3 touch-DEF.SG river
 ‘That hole filled up with water as if they had touched a river.’

(7b) *Disen ke da kastiga 'na,*
They.say that FUT3 punish somebody

porke nu'bu: hingi úni da kita
because when NEG give FUT3 take-away

nä'a gi pe:ts'i. (EAV)

DEIC PRS2 have

'They say that he will punish somebody because when you don't give he will take away what you have.'

Note that in (7a) there is even a *bu:* inserted after the double *komo=ngu*. As we already suggested above with respect to COND, this may be indicative of the fact that *(nu)'bu:* should be given a wider scope for its interpretation than just CNTMP 'when'. Apparently, in certain purely Otomi contexts it might be interpreted as having most of the other functions, as a kind of *passerpartout* subordinator, or even with neutral value. The borrowed elements may then serve to make the relationship in question semantically less vague.

Also for subordination we made a comparison with the frequencies in the Davies (2002) corpus of Spanish, expressing the occurrences for native and borrowed markers of the respective categories in terms of occurrences per 1000 tokens. Spanish has many more subordinators than the ones we found as loans in our corpus. We counted only the occurrences of the twelve relevant forms, and of these only the actual subordinators, not the corresponding prepositions. The only exception we have made is for the preposition *para* 'for, in order to', which codes 98% of the Otomi RESL cases, and is frequently used with an infinite verb form for that function in Spanish. This obviously leads to an underrepresentation of the amount of comparable cases in the Spanish corpus.¹⁰ Against this background, we arrived at the totals presented in Table 7.

CATEGORY	OTOMI	BORROWED	TOTAL	CORPUS DAVIES
CNTMP	3.3	1.1	4.4	1.8
POST	0.2	0.8	1.0	0.1
ANT	-	0.8	0.8	0.1
COND	-	0.1	0.1	3.0
REAS	0.7	4.2	4.9	8.5
RESL	-	7.1	7.1	1.8
NEUT	-	1.9	1.9	11.1
TOTAL	4.2	16.0	20.2	26.4

Table 7: Occurrence of subordinators per 1000 words

The contrast here is even sharper than for the coordinators. When we look at the Otomi elements alone then they mark less than a sixth of what is marked in the Spanish corpus. There is a dramatic increase, however, via the borrowed elements, which bring the total to the same proportion that we found for coordination: around 75%. Reason and Result profit from this in the first place. Especially the latter is remarkably frequent. It may be the nature of the corpus that is

¹⁰Taking all subordinators into consideration, we counted 30.5 per 1000 words, which is around 50% more than for Otomi, the borrowings included.

responsible for this, and the way it was elicited. It is also possible that REAS and RESL as possible functions of *para (que)* are mixed up by native speakers of Otomi, and that part of its use should be interpreted as REAS rather than RESL. The only category for which the native Otomi frequency is higher than the corresponding one in the Spanish corpus is CNTMP. The difference is even greater when we add the loan elements. This may have two causes. Firstly, Spanish has a number of markers that express this relation, and we counted only the ones that were also found in the Otomi corpus. Secondly, we already suggested that the Otomi CNTMP marker *(nu)'bu:* may in fact have a much wider interpretation than just temporal. COND is of course the most likely one. 'When' may replace 'if' in many contexts, also in English and other languages. It may even operate as a neutral marker of subordination, a function that is highly frequent in the Spanish corpus since the marking of subordination is obligatory for finite clauses. Finally, as we have seen, *(nu)'bu:* doubles with other markers, and such occurrences are registered here as CNTMP.

There is no doubt that borrowing has led to a considerable increase in the explicit marking of relations between clauses in Otomi, and a clearer distinction between main and subordinate clauses than in the classical language. The same was observed, although to a somewhat lesser extent, for coordination. Since we do not have access to a corpus equivalent to ours but constructed some 50 years earlier, it is difficult to establish for sure whether the borrowed co- and subordinators only replace the native markers that would have appeared in the corresponding context, or whether they have really increased the amount of marking taking place. In the next section we will briefly discuss this issue.

4. Borrowing Co- and Subordinators: Substitution or Insertion?

By lack of real historical data an alternative way to check whether changes have taken place over time in the coding of clause relations is hidden diachrony: we can compare the output of older and younger speakers in the corpus. An obvious hypothesis to test would be that younger speakers would employ significantly more explicitly coded coordination and subordination than the older ones, whether based on native or borrowed markers. This would be indicative of an overall increase in marking. If this hypothesis would receive support from the data, we would probably have insertion in case the surplus is mainly based on a higher amount of borrowing. If not, we may speculate that it is the overall higher coding frequency of Spanish that make the younger speakers move in that direction. If the inequality hypothesis was rejected, and we found more or less the same amount of coding for both groups of speakers, a greater amount of borrowing for the younger group would point towards substitution.¹¹

In order to get an impression of the possibilities, we divided our respondents into four age groups, as indicated in Table 8. We had reliable personal information for only 55 out of 59 respondents. We calculated three mean values for each of the groups: the overall borrowing percentage, the combined percentage of co- and subordinators used, and the fraction of these that was borrowed.

¹¹Logically, more scenarios and conclusions are possible. We will not investigate those here.

AGE GROUP	FROM - TO	N OF INF	% BORROW	% CO + SUB	% CO+SUB BORROWED
1	- 12	13 (24%)	0.16	0.051	0.55
2	13 - 25	12 (22%)	0.14	0.051	0.53
3	26 - 50	15 (27%)	0.14	0.049	0.54
4	51 -	15 (27%)	0.14	0.046	0.56
ALL		55	0.15	0.048	0.55

Table 8: Age groups respondents

The first thing that strikes is that the borrowing percentages are virtually the same for all four groups. Thus, at a global level the borrowing behaviour is very similar for all age groups. The same seems to be the case for the use of co- and subordinators. The percentages are a fraction higher for the younger groups than for the older ones, but the differences are never significant, not even between ‘extreme’ groups 1 and 4. The fraction of loans is also very much the same for all groups.¹²

Thus, none of the age-related hypotheses presented above gets support from our data, and no conclusions with respect to the substitution vs. insertion question may be drawn with respect to the latest generations of Otomi speakers. Possibly, the changes that have taken place go further back in time, at least part of them. Indeed, Zimmermann (1992:274f) observes that in 18th Century Otomi texts he found quite a few Spanish function words, an indication that language contact already had a major influence on the producers of these texts. Arguably however, in order to be literate these authors must have been very familiar with Spanish in the first place, probably not a common situation for 18th Century native speakers of Otomi. Their numbers, and their influence on the language community cannot have been great. Nevertheless, it might mean that some borrowed coordinators and subordinators go a long way back, and have been fully integrated in the language of at least the more educated speakers. The frequencies and distribution over the informants are highly suggestive of this. So it is not unlikely that, in order to find a proper answer to the substitution vs. insertion question we would have to go back considerably further in the history of both languages. But the obvious lack of spoken corpora from earlier stages makes such an exercise for Otomi virtually impossible. Since we are convinced that at least some awareness with respect to the borrowing status of the clause markers is still present in the Otomi speech community, we would like to make some, inevitably rather speculative observations on the basis of the figures presented in section three. We do this obviously without the illusion that this could lead to a really reliable, let alone final answer to our question.

Under a complete substitution scenario, borrowing would not really affect the marker density quantitatively, only qualitatively, potentially providing more specialization. We think that the code doubling that we have observed for both coordination and subordination may be indicative of substitution. This phenomenon could be interpreted as an intermediate stage in a process in which one form – the native one – is replaced by another – the borrowed one. There is grammatical interference: both forms are triggered, and the speaker produces both. In one case, i.e. the combination of Sp. *komo* and Ot. *ngu* ‘because’, we even saw the merger of both forms into one new compound form. Obviously, code doubling in itself does not increase the overall

¹²A dimension that does seem to play a role is education. The mean Co+Sub percentage for the higher educated subgroup is 0.053 and for the lower one 0.044. This difference is significant on a T-Test ($p=.004$). Education means more intensive contact with Spanish, and written language varieties.

amount of coding, it just creates polysynthesis. The fact that in all cases of code doubling the loan element comes first – i.e. in the canonical syntactic position – seems to suggest a ‘take over’ process. A further necessary assumption would then be that for all cases where we now find a borrowed element we would have had a corresponding native element. A second argument for substitution is that of specialization: we could assume that semantically more specialized borrowed elements replace potential uses of the more general native elements. E.g. Sp. *después* ‘after’ and *si* ‘if’ would replace uses of Ot. *nu’bu*: ‘when’.

There are also arguments that favour an insertion scenario. In that case the loan elements would be used in situations in which the classical language would have had an asyndetic clause pair. As a result, the marker density would increase with respect to the classical situation. Firstly, we could argue that the very small set of rather general native markers made it easier to leave them out in discourse, since apart from the marking of the subordination relation itself not much information would be lost anyway. Only in a restricted number of contexts would they be called for, e.g. to disambiguate, often unnecessary in face to face interaction. A little experiment we did with native speakers seems to confirm this. We randomly selected a number of utterances with coordinators or subordinators from our corpus, and presented them to our informants after having removed the markers. In virtually all cases these sentences were found to be acceptable, and no suggestion for the insertion of a clause marker was made. If we reject the specialization assumption made above, a second argument for insertion could be that Spanish loans have entered Otomi for categories for which, as far as we can see there were no markers in the classical language in the first place. So, no coding would then have been present in such contexts, possibly only more elaborate adverbial expressions. Notably, these markers are the ones for ADVRS, NEG, ANT and RESL. The sheer availability of these forms thanks to their high discourse frequency in the second language Spanish enriched the grammatical inventory of the first language Otomi, and led to an increase in the coding of clause relations.

Further argumentation may be based on the frequencies that we observed for the respective markers. For virtually all borrowed elements that we have encountered, the number of informants that use them is remarkably high: between 59% and 100%, with an average of 88%. The only exception is *si* ‘if’, which is used by only 10% of the informants. As argued earlier, these forms may therefore be safely given the status of ‘borrowed’ in the sense of having become part of the Otomi inventory of the vast majority of the speakers, if not all. Despite the availability of this extra material, however the co/subordinator density is still comparatively low in the Otomi corpus in comparison to the Spanish one. Looking at the results in Tables 7 and 9 we see that for spoken Spanish the combined number of CO and SUB per 1000 tokens is 60.0. This is a rather high number, even higher than the corresponding number we found for the three parallel corpora of *written* Spanish in Davies (2002), for which we found a mean combined CO/SUB density of 54.7.¹³ For Otomi, on the other hand, we established a total of only 46.6 per 1000, of which 54% are borrowed markers. We think that this is indicative of a fundamentally lower general tendency to explicitly mark clausal relations in spoken Otomi than in Spanish. However, we find interesting differences between the relative frequencies of the respective categories. For both coordination and subordination Otomi has one very frequently used marker with a rather general meaning. The CONJ marker *nehe* ‘and’ represents 92% of the use of the native coordinators, and the CNTMP marker *nu’bu*: ‘when’ represents 79% of the native subordinators in

¹³We assume, though, that the mean sentence length for written Spanish is considerably higher than for the spoken varieties. Sentences, or clauses, rather than words might be the best basis for measurement and comparison in this case.

the corpus. Nevertheless, a Spanish equivalent is borrowed for both of these. In either case the use of the borrowed form is much less frequent than that of the native one: 11% and 25% of the total for the category, respectively. Our hypothesis would be that what takes place here is mainly substitution. There does not seem to be much reason to assume that a borrowed element would be employed to extend the use of an already highly frequent native element in what seems to be the same function. Furthermore, complete substitution in the system of a frequently used native element by a more or less equivalent borrowed one will typically take up quite some time in the diachronic sense. And although the two loan equivalents may have been present in the language of a small minority of the speakers much earlier, for the vast majority of the Otomi speakers intensive contact with Spanish dates back not much longer than half a century. There seems to be less reason on the other hand for insertion to proceed gradually, once a form starts occurring in the output of some speakers. Thus, the relative frequencies point into the direction of a substitution scenario for CONJ and CNTMP. And it is precisely for these two cases that code doubling is found most often.

For the other relations for which a native marker is available, DISJ, POST and REAS, we found precisely the opposite. The native markers are much less frequent in the absolute sense, and their relative frequencies are considerably lower than the corresponding borrowed elements. For the same token, this might be more suggestive of an insertion scenario. For the 'new' relations, ADVRS, NEG, ANT, COND, and RESL, for which there is no specialized native marker available, insertion seems to be the only logical option, although we have argued that for at least ANT and COND, the CNTMP marker might have been a substitute in some cases, while CONJ might have been present in at least part of the potential ADVRS cases.

With no firm basis to draw reliable conclusions, the only thing that we can suggest with some confidence is that without contact, and no relevant diachronic changes in Otomi itself, the amount of coding of coordination and subordination would probably have been anywhere between 21.3 – the current amount of native coding - and 46.6 – the total amount, including the loans - per 1000 words. If we apply the speculative remarks above, with substitution only for the two most frequent relations, and the rest inserted, we would end up at 24.4 per 1000. This is just over half of the current total. And it is fundamentally lower than the 60.0 per 1000 that we found for spoken Spanish, and which, as we argued, must be a considerable underestimation of the real amount of functional subordination, since this is partially 'hidden' in nonfinite prepositional constructions.

5. Conclusion

In the introduction we formulated two hypotheses. The first one was that in informal face-to-face communication the relation between constituents at the phrase and the clause level may be left implicit, but that in language communities where writing and formal education is wide-spread, prescriptive grammars will influence in the spoken language and make that the relations at the different levels are expressed more explicitly. A second hypothesis was that a language with a low amount of marking in intensive contact with a language with more extensive marking would borrow some of that behaviour.

Otomi seems to reflect our hypothesis about the difference between a language with a written tradition and one without it. Indeed, it turns out to have only a small set of native elements that mark interclausal relations. With respect to coordination, one of the three markers generally available to languages – the Adversative - is missing. As for subordination, three of the six

categories distinguished in Cristofaro's (2003) classification – viz. Anteriority, Condition and Result – do not have a specialized marker in classical Otomi. This is indicative of a rather modest amount of coding of clausal relations, probably quantitatively, but most certainly qualitatively. Spanish, on the other hand possesses complete sets for all categories, with around 10 coordinators and over 40 subordinators available to the speaker. The hypothesis gets further support from the fact that, in the light of the frequencies measured in two corpora, it became clear that Otomi speakers mark clausal relations considerably less frequently than speakers of Spanish. This turned out to be true to more or less the same extent for both coordination and subordination.

The second hypothesis turned out to be more difficult to establish. We found that, indeed, Otomi borrows a number of coordinators and subordinators from Spanish, for new and existing functions, thereby completing its inventory for both types of clause combining. The borrowed elements make up more than a third of the explicit coordination, and a massive 80% of the subordination in contemporary spoken Otomi. This borrowing may have been easier since many Spanish subordinators are analyzable into a preposition, which is often borrowed in its own right, followed by the general subordination marker. In turn, this structure may be indicative of the fact that such subordinators are also relatively new to Spanish, although we would have to go back many hundreds of years to confirm that hypothesis. However, the question whether these new markers replace existing marking or extend the amount of marking could not be answered properly, mainly because of the lack of diachronic evidence. It could be established, though, that the overall amount of explicit coding is considerably lower than for Spanish for both types of clause combining, despite the borrowing. This fact, and the relative frequencies of the respective markers and their morphosyntactic behaviour led us to the somewhat speculative assumption that most of the borrowed elements indeed fill a gap in the recipient language, also in the sense that at earlier stages such sentence combinations would most probably have been asyndetic.

A final observation is that borrowing has not led to the introduction of new structures in the grammatical system of Otomi. Both coordination and subordination were existing strategies in the classical language, witness the existence of specialized markers and elements that can only appear in certain types of clauses. A side effect, however may be that certain native markers have become more specific with respect to their meaning, and that by the sheer increase in the respective frequencies, marking may, or has already become less optional in some contexts.

Ours can be no more than a contribution to the discussion about the possibilities and effects of borrowing in relation to clause combining. We are convinced that the matters discussed here are, as always much more complex than we might have suggested. Being based on just one pair of languages, the hypotheses we proposed can in no way have been confirmed in any strong sense, probably at best not rejected. For that, many more equivalent language pairs should be studied from the same perspective.

Abbreviations

1: First Person; 2: Second Person; 3: Third Person; ADJ: Adjective; ADV: Adverb; ADVRS: Adversative; ANT: Anteriority; CNTMP: Contemporality; CO: Coordinator; COND: Condition and Concession; CONJ: Conjunction; COP: Copula; DEF: Definite; DEIC: Deictic; DISJ: Disjunction; DISM: Discourse Marker; EMPH: Emphatic; EXCL: Exclusive; FUT: Future; INDEF: Indefinite; LIM: Limitative; N: Noun; NEG: Negation; NEUT: NEUTRAL; PL: Plural; POSS: Possessive; POST: Posteriority; PREP: Preposition; PRF: Perfective; PRS: Present; PST: Past; PURP: Purpose; REAS:

Reason and Manner; RESL: Result and Purpose; REFL: Reflexive; SG: Singular; SUB: Subordinator; TOPN: Toponym; V: Verb

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