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## **The evolution of number in Otomi: The many faces of the dual**

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## Abstract

Otomi (Oto-Pamean, Oto-Manguenan) is a small group of languages spoken in Mexico which has emerged as a linguistic family in recent times. In this paper, I study relevant changes in the number system of the Otomi languages. These changes constitute an interesting object of study to gain a better understanding of two main phenomena: aspects of language change involving the loss of dual number, and the constraints on number agreement restricted to conjoining structures. I show that changes in the number system in the Otomi family have different outcomes depending on the dialectal area. Such outcomes include the loss of dual morphology through a semantic rearrangement where the old dual forms have become exponents of either paucal or plural number. In some of the varieties, the old dual is still preserved, but it is relegated to male speech as a token of partnership and camaraderie.

## 1. Introduction.<sup>1</sup>

In this paper, I study relevant changes in the pronominal number system of Otomi which were triggered by the loss of dual number. Otomi is a language family spoken in Mexico which belongs to the Oto-Pamean branch of Oto-Manguenan. The first attestations of Otomi date back to the late 16th and the early 17th centuries and reveal a linguistic system which was the common ancestor of the modern languages known as ‘Old Otomi’ or ‘Colonial Otomi’. Given the large presence of Otomi Indians across the valleys of Central Mexico from the Classic period and onwards, Old Otomi, as the language they spoke, was most likely a diversified dialectal continuum already at that time rather than a unified language. From the 18th century onwards, this old dialectal continuum breaks up into a small linguistic family which has come to consist of at least six different languages. Three of such languages (Northern, Eastern and Western Otomi) should in turn be viewed as dialectal continua consisting of various local varieties.

The paper is concerned about number, which is one of the most fundamental grammatical features in natural language, and more specifically about dual number. Following Corbett (2000), which remains to date the most comprehensive study of number from a cross-linguistic typological perspective, the simplest and most widespread number system has an opposition between singular and plural values, like in English nouns *dog* vs. *dogs*. In such a system, as Corbett (2000: 20) puts it, “[p]lural here refers to more than one real world entity”.<sup>2</sup> The next common number system has three values: singular, dual and plural, and dual here is a value that refers to two distinct real world entities,<sup>3</sup> like in Vedic (nominative) *tanús* ‘body’ vs. *tanúā* ‘two bodies’ vs. *tanúas* ‘(more than two) bodies’ (extracted from Macdonell 1910: 291).

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<sup>2</sup> The language in question establishes whether the division with the singular starts at ‘more than one’ (i.e., English *one and a half days*, where plural is used just as in *two days*) or ‘two or more’ (i.e., Spanish *un día y medio* (\**uno y medio días*), but *dos días*).

<sup>3</sup> In Classical Greek nouns, however, the dual is already restricted to things that may come in pairs, such as *hýppos* ‘horse’ whose dual form *hýppō* (nominative/accusative/vocative) refers to ‘the two horses of a chariot’, not just two horses in general (Monro 1891: 161).

On the other hand, number may involve nominals as well as pronominals,<sup>4</sup> and hence we have nominal number and pronominal number, and languages may have both, either or none.<sup>5</sup> Pronominal number involves grammatical person, and it is commonly realized in personal pronouns and possessives (e.g. the first person pronouns of Gothic (nominative) *ik* ‘I’ vs. *wit* ‘we two’ vs. *weis* ‘we’, Agud and Fernández 1988: 139), but also in verb agreement (e.g. Vedic present (indicative, active) forms for the first person *bhárāmi* ‘I bring’ vs. *bhárāvas* ‘we two bring’ vs. *bhárāmasi* ‘we bring’, Forston 2004: 89).

In Old Otomi, the number system in pronominals was based on a singular-dual-plural opposition, but the dual became an unstable value in the breaking up of the old dialectal continuum. The instability is witnessed in that some of the modern languages stray considerably from the original situation, while others have preserved it. What is typologically interesting about the dual in Otomi is not so much its loss and the subsequent reanalysis that took place in the system to make up for it, but the traces left behind of its instability, which are reflected in curious places in the grammar. In Northern Otomi, for example, while dual still exists in the language, it only has a pragmatic function to express a sense of camaraderie between two male speakers. In contrast, in the Southern languages, Tilapa Otomi and Ixtenco Otomi, the old dual forms have become exponents of plural, but there is slight variation depending on the specific degree of advancement of this change.

The overall goal of this paper is to present an overview of such outcomes and to judge them when possible in the light of similar changes documented elsewhere. To do this, the structure of the paper is as follows. First I give a brief overview for the loss of dual cross-linguistically, illustrating the typical scenarios we find in their diachrony and directing the reader to relevant literature. This introduction is intended to frame the developments found in Otomi in a broader typological context. Similarly, in order to set up the genetic background for Otomi, I also give an overview of the number system of Oto-Pamean at the end of this section. In section 2, I introduce Otomi as a linguistic family and I present a brief description of the morphology involved in the making of number oppositions. Then in section 3, I introduce the number system of Old Otomi. This is intended as a landmark to understand the relevance for the different situations found in the modern languages, which I develop extensively in section 4. Section 5 provides a discussion of the relevance of the different outcomes found in Otomi and section 6 concludes.

### 1.1. The loss of duals: an overview

The dual is a resilient number value in many language families cross-linguistically, and from the observation of their behavior in a large database, Plank (2003) points out that the life cycles of duals are often remarkably long. However, in the evolution of number systems, duals may also be lost. For example, a dual value is found in the number system of some of the older Indo-European languages,<sup>6</sup> but it gradually reduced its functionality or became lost

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<sup>4</sup> Another possibility is verbal number, whose study lies outside the scope of this paper.

<sup>5</sup> About dual number, there is the expectation framed under universal 564 in the Universals Archive accessible at <http://typo.uni-konstanz.de/archive/nav/browse.php?number=1&PHPSESSID=rhbji3mj02r3anuh5op4e3v49rjp2qcc>, which states that ‘if the dual extends to nouns, then it also extends to pronouns’ (see Plank and Schellinger 2000). There are numerous counterexamples to this universal (e.g. Celtic languages have vestiges of nominal number, but no trace of pronominal number), all of them discussed in Plank (1989). An additional counterexample is Otomi.

<sup>6</sup> Most notably, in Indo-Iranian (mainly in Vedic), in Greek, in Germanic, in Balto-Slavic and in Tocharian (in the dialect so-called Tocharian B). However, it is not found in Anatolian, the earliest attested branch of the phylum, nor in Italic and Armenian, while in Celtic it only appears in nominal number. Whereas the absence of dual in such groups could in principle be interpreted as a historical loss of this value, the consensus is,

altogether in most of the modern languages (see Corbett 2000: 269 for references).<sup>7</sup> In Greek, for example, the dual is relatively common in the Homeric texts (Monro 1891), but its occurrence becomes increasingly rare throughout the classical period, until the time of the koine in the Hellenistic period when it is lost altogether in both its nominal and pronominal domains (Forston 2004). Similarly, in Balto-Slavic the dual has only survived in Upper and Lower Sorbian (Stone 1993) and in Slovene (Priestly 1993). Nevertheless, the loss of dual number is not in itself as interesting a phenomenon as the ways its loss may happen.

To briefly illustrate this point, I outline here two representative outcomes attested in Germanic involving pronominal number which are relevant for the purposes of this paper because they are also found in Otomi, together with further, hitherto unknown outcomes.<sup>8</sup>

In Gothic, the earliest attested Germanic language, we find dual forms in both verbs and pronouns, but only for the first and the second persons in the active voice (Wright 1910).<sup>9</sup> This is illustrated in (1) and (2) when comparing the inflection of dual and plural, respectively (from the Wulfila Project hosted by the University of Antwerp, glossing mine).<sup>10</sup>

(1) a. ...swaswe **wit** ain **siju**  
 GOTH even.as we.DU one.NOM.SG be.PRS.1DU  
 ‘Even as we (two) are one.’ (John 17:22<sup>11</sup>)

b. þau ainzu ik jah Barnabas ni hab-**os** waldufni du ni waurkjan?  
 or only I and Barnabas NEG have-1DU power.ACC to NEG work-INF  
 ‘Or I only and Barnabas, have not we power to forbear working?’ (Corinthians I 9:6<sup>12</sup>)

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nonetheless, that dual number is of latter development in the phylum so that it should not be reconstructed for the proto-language.

<sup>7</sup> Another well-documented case of duals being lost is Arabic, where the modern dialects have also lost the old dual in the pronominal system (Kaye 1987).

<sup>8</sup> The interested reader is directed to Corbett (2000) for an extensive exploration of the typological distribution of number systems with a dual value, to Jensen (1952) and Plank (1989) for dual diachrony and to Plank (2003) and Plank and Schellinger (2000) for well-informed reviews of the implicational relations duals hold to other features typologically.

<sup>9</sup> As for pronouns, in other old Indo-European languages with a singular-dual-plural opposition, the dual was also already relegated to the first and second persons only (e.g. Vedic nominative singular *ahám* ‘I’, dual (*ā*)*vám* ‘we two’, plural *vayám* ‘we’, and nominative singular *tvám* ‘you (sg)’, dual *yūvám* ‘you two’, plural *yuyám* ‘you (pl)’; or Attic Greek nominative singular *egō* ‘I’, dual *nō(i)* ‘we two’, plural *hēmeis* ‘we’, and nominative singular *sū* ‘you (sg)’, dual *sphō* ‘you two’, plural *hūmeis* ‘you (pl)’, Adrados *et al.* 1998: 31ff). Anaphoric demonstratives, which are reanalyzed as third person pronouns in the different families, have only a singular-plural opposition in all Indo-European languages.

<sup>10</sup> Abbreviations: ACC accusative; ADN adnumerative; AMBU ambulative; AS adjusted stem; B bound shape; CISLOC cislocative; CIT citative; DAT dative; DEF definite; DEM demonstrative; DET determiner; DIM diminutive; DIR directional; DIST distal; DU dual; DUR durative; ENC phrase final enclitic; EXCL exclusive; F free shape; FEM feminine; GOTH Gothic; HO Huehuetla Otomi; HON honorific; IDENT identificational particle; IMM immediative; IMP imperative; IMPF imperfect; INCL inclusive; INF infinitive; INFL index of inflectional class; INTR intransitive; INTRO introductory particle (definite, topical, etc.); IRR irrealis; IXT Ixtenco Otomi; LOC.P locative preposition; M masculine; MEZ Mezquital Otomi; MIDD middle; NEG negative; NOM nominative; OBJ object; OE Old English; OO Old Otomi; P anterior particle; PL plural; POSS possessive; PRF perfect; PRS present; PURP.MOT purposive motion; PST past; REFL reflexive; REL relative; R realis; SF San Felipe Otomi; SIT San Ildefonso Tultepec Otomi, SG singular; SS secondary stem; TIL Tilapa Otomi; TOL Toluca Otomi; TRANSLOC translocative.

<sup>11</sup> <http://www.wulfila.be/gothic/browse/text/?book=2&chapter=17>.

<sup>12</sup> <http://www.wulfila.be/gothic/browse/text/?book=6&chapter=9>.

(2) duhve **weis** jah Fareisai-eis fast-**am** filu,  
 GOTH why we.PL and Pharisee-PL.NOM fast-1PL much  
 ip þai sponj-os þein-ai ni fast-and?  
 but the.PL.M.NOM disciple(M)-PL.NOM 2POSS-NOM.PL NEG fast-3PL  
 ‘Why do we and the Pharisees fast oft, but thy disciples fast not?’ (Matthew 9:14<sup>13</sup>)

The situation found in Gothic, as illustrated in (1-2), is taken to be the situation in Proto-Germanic (Ringe 2006). In the rest of the Germanic languages, a dual value is only found in pronouns. In other words, there are dual forms for the first and second person, but the verb has lost the old dual inflection and it now agrees with a dual pronoun in the plural only. This is the situation found in Old English (Mitchell 1985), in Old Frisian (Bremmer 2009), in Old Norse (Gordon 1992[1957]), and in Old High German (see for example Howe, 1996: 244ff, for more details).

In contrast to the old languages, in the pronominal number of the modern languages, the dual has been lost. The loss of a dual value is preceded by a stage in which the meaning of the plural has also changed to accommodate the reference for two people.<sup>14</sup> Typically, the loss of the dual also coincides with a period where the dual is perceived and used as a facultative value (for facultative number, see Corbett 2000: 42 ff). For example, in Old English we still observe that dual pronouns have a dual meaning referring to a group of two people (i.e. the speaker and hearer; the speaker and somebody else; or the hearer and somebody else), yet the old plural forms are already used in the system with a meaning proper of a simple singular-plural system because they can indicate more than one individual, that is, two or more, and for that purpose they freely occur in situations where dual pronouns are used. This is illustrated in the passages in (3-4), where the reference is of only two individuals, but they are referred to by dual and plural pronouns indistinctively in different clauses. In (3), we have the dual (middle/reflexive) *unc* and the plural *we* for the first person, while in (4) we have the plural (accusative) *ge* and the dual (nominative) *gyt* and (accusative) *inc* for the second person (Mitchell 1985: §258, glossing and translation mine).

(3) ic 7 þæt cild ga-ð **unc** to gebidd-enne,  
 OE I and the child go-PL we.DU.DAT/REFL to pray-INF  
 7 **we** syððan cum-að sona eft to eow  
 and we.PL.NOM after come-PL soon again to you.PL.DAT  
 ‘The child and I will go to pray (Lit. pray ourselves (DU)) and we (PL) shall come later back to you (PL) soon.’

(4) ða cwæð Petrus: seg-e me,  
 OE then said.3SG Peter say-IMP me.DAT  
 beceap-od-e<sup>15</sup> **ge** ðus micel land-es?...  
 sell-PST-3SG you.PL.NOM thus much land-GEN.SG  
 hwi gewearð **inc** swa,  
 why became.3SG you.DU.ACC so

<sup>13</sup> <http://www.wulfila.be/gothic/browse/text/?book=1&chapter=9>.

<sup>14</sup> Although perhaps a banal point, one should remember that the existence of a dual value in a given number system has a bearing on the meaning of the plural in that system, as plural will then be used for three or more real world entities. This means that the plural of English is not the same as the plural in Sanskrit (a general point made by Saussure 1916/1971: 161, also in Corbett 2000: 5).

<sup>15</sup> The verb *beceapian* ‘sell’ appears here in singular. Verbs in Old English may not agree in number with their subjects when they precede them (see Mitchell 1985: 635-639 for numerous examples).

þæt gyt dorst-on fandi-an God-es?  
 that you.DU..NOM dared-PST.PL tempt-INF god-GEN.SG  
 ‘Then Peter said: “Tell me, did you (PL) sell the land for so much?”...“How is it that you (DU) agreed to tempt god?”.’

Once the old plural forms can do this job, the old dual forms may become superfluous and may be lost, as they were in the Middle English period, where they survived in the conservative dialects of the South only until the beginning of the 13th century (Mossé 1952: 55).

In the development illustrated by the English pronouns, the dual forms are lost along with the dual value they convey. While this remains a common development, there is yet another possibility which involves keeping the old dual forms but reanalyzing them as exponents of plural. This has also happened in the pronominal system of some Germanic languages, most notably in Icelandic.

In Icelandic, the old dual pronouns for the first and second person (*við* ‘we (DU)’ and *þið* ‘you (DU)’) have become plural forms, while the old plurals (*vér* ‘we (PL)’ and *þér* ‘you (PL)’) have become more restricted and are now only used as honorific plurals (Einarsson 1945: 68, 122 and Guðmundsson 1972 *apud* Corbett 2000: 269).

In a similar fashion, vestiges of the dual remain in Norwegian, which has a hybrid paradigm for the first person plural, where the subject form *vi* stems from the old dual *vīt* (cognate of Icelandic *við*), while the object *oss* is the reflex of the original plural form. For the second person, similar mismatches have been reported in the Bavarian German dialectal area. In some varieties of Bavarian, the old second person dual pronoun *eß* has fully replaced the original plural *ihr*, while others have retained it (Kranzmayer 1954: 252ff, *apud* Howe 1993: 121ff).<sup>16</sup> Outside Germanic, a similar development is found in Slavic Cassubian.<sup>17</sup>

The situations in Icelandic, Norwegian and Bavarian require the old dual forms to be able first to extend their semantic scope to include sporadic reference to more than two individuals, possibly three or four, depending on the situation, and once established as a possible reference for a small group of individuals, they can replace the old plural, which by then may have most likely become obsolete. This is what we find in the old dual of Old Norse which had a paucal extension, i.e. the inclusive plural construction *þit móðir mín* could both mean ‘you (SG) and my mother’ (i.e. dual reference ‘the two of you’) as well as ‘you (PL) and my mother’ (i.e. with plural reference ‘you, him and my mother’) (Gordon 1992[1957]: 313, see also Faarlund 2008). This development is exactly the opposite of what happens when plural forms replace the old dual forms, as in Middle English.

In this paper, I show that in the Otomi family a range of similar developments also occurred involving the dual: some of the varieties retained the old dual, while in others it got considerably weakened and eventually lost altogether. Furthermore, in the languages where we witness the loss of the dual, there are those like English (i.e., which have lost the dual

<sup>16</sup> In addition, Simon (2005) claims that in honorific usage, the pronoun *Sie* in Bavarian indicates an inclusive second person (i.e., a plurality of hearers), while *eß*, the default second person plural pronoun, would in contrast be used with an exclusive value (i.e., the hearer plus somebody else not present). I remain sceptical whether this is the right interpretation of the data. I want to thank the first anonymous referee for pointing this reference out to me.

<sup>17</sup> Stone (1993b) reports that the old dual forms for the first and second person in Cassubian (i.e. *ma* ‘we’ and *wa* ‘you (PL)’) have acquired a plural meaning and alternate with the historical plural forms *mē* ‘we’ and *wē* ‘you (PL)’, although it seems they still preserved a dual meaning in the northern variety up to the first half of the 20th century (Breza and Treder 1981: 125 *apud* Stone 1993b: 773).

markers along with the dual value) and others like Icelandic (i.e., which have lost the dual value but kept the dual markers having reanalyzed them as plurals).

The Otomi case is interesting for a theory of language change because it provides us with a rich scenario of possibilities, where we can observe: (i) how different typological outcomes can be brought about in a relatively short time, and (ii) how the duals may survive in specific registers and grammatical contexts. In this connection, the developments in Otomi can be instructive both for the linguistic typologist as well as for the historical linguist. As an illustration of this, consider for example the case of Northern Otomi which I will develop further in section 4.4.

In Northern Otomi, the syntax has a singular-plural opposition like in English, dual forms have disappeared both in the pronominal system and in verb agreement. Nonetheless, we still observe sporadic uses of dual forms in verbs, but their usage is conditioned either by the pragmatics or by the specific requirements of the syntax of conjoining. In other words, the old dual value clings on, but associated with a special register of adult males where it is perceived as a token of camaraderie. Similarly, the old dual forms have been retained in a conjoining construction dedicated to the expression of comitative semantics, where the idea of ‘I play with you’ is construed with the dual as “I play-DU you”. In such a construction, dual forms are obligatory, but more interestingly they have been reanalysed as exponents of a paucal value, i.e., a structure such as “I play-DU the men” is used to mean ‘I play with the men’ if the men involved are perceived as a handful of individuals, otherwise the plural is used. This resulted in a rather mixed number system which is discussed in section 5.

In the remainder of the paper, I present all these outcomes, but an introduction to Otomi in its broader genetic context is given first to understand the relevance of the internal changes. This is the purpose of the next section where I present the basic number system of Oto-Pamean.

## 1.2. The common number system in Oto-Pamean.

Otomi is spoken in Mexico and it belongs to the Oto-Pamean branch of Oto-Manguenan.<sup>18</sup> Oto-Pamean itself is made up of two distant subgroups: Otomian and Pamean, hence the name. This is indicated in Table 1. The languages are geographically located in Map 1 for convenience, which is adapted from Soustelle (1937).

INSERT TABLE 1 HERE

INSERT MAP 1 HERE

The nouns in Oto-Pamean languages inflect according to a singular-dual-plural number value opposition. This happens in all Oto-Pamean languages except in those of the Otomi-Mazahua subgroup, where the nominal number has been reduced to a simpler singular-plural opposition. This is illustrated in the Otomian group in (5) comparing Matlatzinca (Bartholomew 1966: 40-41) and Tilapa Otomi. Number values are realized in these languages by means of number determiners preceding the noun. These determiners appear in boldface in (5).<sup>19</sup>

<sup>18</sup> In a way, Oto-Pamean is to Oto-Manguenan what the Anatolic branch is to Indo-European, that is, it is the earliest branch to split from the proto-language and is thus structurally very distant from the other branches of the phylum.

<sup>19</sup> For the orthography of Otomi I use here the consensus used by most authors. As for consonants: *C*' represents an ejective, and <sup>h</sup>*C* pre-aspirated; *f* /p<sup>h</sup>/; *'* /ʔ/; *ñ* /ɲ/; *c* /t͡ʃ/; *r* /r/; *x* /x/; and *y* /j/. As for vowels, *ḡ* represents /ɔ/ [ɔ̃]; *ḑ* /ɛ/; *Ḕ* /ə/; *u* /i/, and *ī* /ɨ/, while the dieresis indicates a nasal vowel (e.g. ä /ä̃/ [ã], etc.).

(5) Matlatzinca	SG	<b>in</b> šuʔyowi	‘coyote’
	PL	<b>te</b> šuʔyowi	‘two coyotes’
	DU	<b>ne</b> šuʔyowi	‘three or more coyotes’
Tilapa Otomi	SG	<b>ar</b> mintx’o	‘coyote’
	PL	<b>yi</b> mintx’o	‘coyotes’

Nominal number system is most elaborate in Pamean. This is shown in Table 2 in Chichimec with the inflection of the noun *kinhú* ‘(their) field’, where nominal number intersects with pronominal number of possessor (Angulo 1932: 163, acute indicates high tone; low tone is not represented).

INSERT TABLE 2 HERE

In inalienable nouns in Chichimec like *kinhú* ‘field’ in Table 2, possession is realized by means of tone and stem alternations: the inflection of *kinhú* is given in shading. The singular form for the third person plural possessive is also used in a context where the entity referred to is not associated with any particular possessed entity, so that a form such as *kinhú* can both mean ‘field’ and ‘their field’. Nominal number suffixes (dual *-s* and plural *-r*) occupy the first position after the stem, followed by the number markers of possessor (dual *-(e)s* and plural *-(i)n*). In some of the forms, the occurrence of the dual marker *-s* can ambiguously realize dual of the possessor (with a singular noun) or dual of a noun (with a singular possessor), so that a form such as *kunús* can both mean ‘our (yours and mine) field’ or ‘my two fields’. The suffixes *-m<sup>p</sup>* and *-hú* encode dual and plural exclusive for a possessor, respectively. The only odd forms in the paradigm are the dual forms *kunívós* ‘our (his and mine) two fields’ and *kunhún* ‘our (theirs and mine) two fields’ where the suffixes of nominal number appear after the marker for the number of the possessor.<sup>20</sup>

Similarly, pronominal number in Chichimec is also realized in personal pronouns, as illustrated in Table 3 (Angulo 1932: 155),<sup>21</sup> and in verb agreement, as shown in Table 4 with the inflection of the anterior past tense of the verb *nú* ‘see’ (Angulo 1932: 163-164). The different proclitics in Table 4 are cumulative markers of tense/aspect/mood values and the person of the subject. Notice that the dual and the plural forms are based on the singular by adding the same number markers that encode number for the possessor in Table 2. The only exception to this pattern is the third person plural which require stem alternant, i.e. there is no such forms as *\*i-no-n* for ‘they (three or more)’ or *\*u-nú-n* for ‘they (three or more) see’, but *i-gó* and *u-nhú*, respectively.

INSERT TABLE 3 & 4 HERE

Whereas a pronominal number system like the one in Chichimec, based on a singular-dual-plural opposition, remains the default system for Oto-Pamean languages, in some of the Otomi languages of the Otomian group this original number system has undergone a deep restructuring towards a simpler singular-plural number system. This happened for example in Northern Otomi and in the Southern languages, Tilapa Otomi and Ixtenco Otomi. Before

<sup>20</sup> Additionally, we find here *-n* instead of expected *-s*.

<sup>21</sup> Angulo's orthography has been slightly modified. The circumflex represents a middle tone; low tone is not represented; a superscript vowel indicates a whispered vowel; and an upperscript *p* indicates a salient plosive release.

studying these outcomes in further detail, in the next section I first make a brief introduction to Otomi as a language family and to the ways number marking is realized.

## **2. An introduction to Otomi.**

In this section, I give a brief introduction to Otomi aiming to present basic information about how pronominal number is encoded. This is essential to understand the number systems that are found in the different languages.

While the internal linguistic diversity of Otomi is uncontroversial (summarized in Lastra 2001), there is no established consensus as to which of the different linguistic subsystems identified so far as Otomi should be treated as independent languages and which as dialects of those languages. This is why Otomi has traditionally been talked about as forming a dialectal continuum rather than a family and why authors in Mexico avoid using terms such as “language” and “dialect” and instead use “variety” as a convenient cover term. Against the inertia of this tradition, the current official stance by the National Institute of Indigenous Languages (INALI) in the CLIN (2008) is to treat Otomi innovatively as forming a “linguistic group” with nine different “linguistic varieties”. INALI’s linguistic varieties are treated as genuine languages for official purposes, that is, for educational, administrative, judicial, social and informative purposes. This is also the stance I take in the present paper although with my own understanding of the current dialectal situation.

Otomi is interesting for a theory of language change because it has emerged as a linguistic family in recent times from having been a dialect continuum historically. The first grammar of Otomi, *Arte de la Lengua Othomi* was written by the Franciscan friar Pedro de Cárceres, who finished it in 1580, although the work was not published until 1907. Cárceres' grammar is of a relatively early date, especially if we consider that the conquest by the Spaniards of the capital city of the Aztec empire, Tenochtitlan, happened in 1525, and that the first dictionary of Nahuatl by Alonso Molina was published in 1551, much enlarged in its second edition of 1571.

The language described in Cárceres is now known as ‘Old Otomi’ or ‘Colonial Otomi’ and it is taken to be the ancestor of all modern languages, that is, it represents the historical stage when Otomi was still a single language. Other historical documents survive of Old Otomi. The most representative ones are the short grammar titled *Arte Breve de la Lengua Otomi* by Alonso Urbano and a large trilingual dictionary (Spanish-Nahuatl-Otomi) whose authorship Acuña (1999) attributes to an anonymous Otomi amanuensis (both works are found in a manuscript dating from 1605). A third document is an unedited and unpublished, anonymous vocabulary dating from 1640, and we also have the Huichapan Codex translated by Lawrence Ecker and nicely edited in Lastra and Bartholomew (2001). Later, two other Otomi grammars were written in the second half of the XVIII century: one written by Neve y Molina and printed in 1767 and another anonymous one titled *Luces del Otomi* later edited by Francisco Buelna in 1893.

Considering that the viceroyalty of the New Spain was well established by 1535, lasting until 1810, and taking the historical documents into consideration, we can roughly date the rise of Otomi as a linguistic family. The crucial thing in this development is that the two existing grammars from the 18th century are already based on an Otomi language which is substantially different from Old Otomi, for example it has a much reduced inflectional system. The language described in these sources is most probably the earlier stage of the Northern language of today, itself a large diasystem including dialects such as Mezquital Otomi, the most widespread Otomi variety with the largest number of speakers. If we estimate an average of 20 years for each generation –most modern Otomi people still marry at a very early age, and there is no apparent reason to believe that this was different in the old

times— there are only nine generations between Cárceres' grammar and Neve y Molina's, and only six if one starts counting from the anonymous vocabulary of 1640.

All this suggests that the innovative Northern language emerged as a distinct linguistic system in a time span of only one and a half centuries, and it seems reasonable to imagine that a similar break up into different distinct dialectal areas must have also happened elsewhere by that time. One can only conjecture that the new social order imposed by the Spaniards after the conquest was partially responsible for the rapid rate at which this change happened (see for example Lastra 2010). The Otomi Indians as a linguistic community, just like other Mesoamerican Indians elsewhere in the New Spain, were confined geographically to their birthplaces, and it is sensible to conclude that this isolation brought about a lack of contact with other communities which in turn maximized linguistic differentiation. However, the reason why the inflectional system of the Northern language became more innovative than in other areas remains an intriguing question that remains open to date.

For the purposes of the present paper, based on the data in Soustelle (1937), Lastra (2001, 2010), Andrews *et al.* (1983) and my own field observations, the different Otomi varieties spoken nowadays could be seen as grouped in four geographical areas representing six different languages. Three such languages are in turn dialectal continua by themselves and include various linguistic varieties as dialects. If Mexico City were taken as a geographical reference point, we could conveniently identify these four areas by using the four cardinal points. In Map 2, adapted from Soustelle (1937), I indicate the four dialectal areas together with the linguistic varieties from which the representative examples involving pronominal number come as given in the paper.

INSERT MAP 2 HERE

## 2.1 Number marking in Otomi.

Otomi languages are head-marking (i.e. there is no case marking on nouns). They have accusative alignment in monotransitive verbs, and an agentive/patientive split in intransitive verbs. Otomi verbs inflect for tense, aspect and mood (TAM) by means of a set of inflectional formatives.<sup>22</sup> Many such formatives also cross-reference person of the subject in a cumulative fashion, and for this reason, they are treated here as “P&TAM” formatives (P stands for person of subject).<sup>23</sup> Examples are given in (6) for the first and second person in San Ildefonso Tultepec (SIT) Otomi, a variety of Northern Otomi.

- (6) a. **dá** = nǔ-ʔ-i  
SIT 1.PST.R=see-2OBJ-F  
‘I saw you.’
- b. **gá** = nǔ-g-i  
2.PST.R=see-1OBJ-F  
‘You (SG) saw me.’

The examples in (6) illustrate the use of two P&TAM formatives for the inflection of the transitive verb *nǔ* ‘see’ and they realize grammatical person, past tense, and realis mood.

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<sup>22</sup> I use the term ‘inflectional formative’ in the sense of Bickel and Nichols (2007), who use it as a cover term for any marker of inflectional information, regardless of its morphological type, that is, regardless of whether it is an affix, a clitic or a functional word.

<sup>23</sup> While lexical roots have a three tonal contrast (high, low and ascending), functional formatives only have a high vs. low tone contrast.

It may be further noted in (6) that objects are cross-referenced by means of suffixes. Phonologically, all P&TAM formatives are clitics in that they are (most commonly) hosted on the verb stem or on a previous functional word.

The P&TAM formatives in (6) make reference to a singular subject by default when occurring alone. A plural or a dual subject is encoded by means of an additional number enclitic. This is illustrated in (7) with the plural marker *hú* for the first and the second persons. Notice that a third person object is encoded by means of the bare stem or a zero morpheme.

(7) a. *dá = nǚ = hú*  
 SIT 1.PST.R=see[3OBJ]=PL  
 ‘We (INCL) saw him/her/them.’

b. *gá = nǚ = hú*  
 2.PST.R=see[3OBJ]=PL  
 ‘You (PL) saw him/her/them.’

The first person plural also inflects for clusivity. Example (8) shows the dedicated plural marker for the first person exclusive. This makes the plural marker *hú* in forms such as (7a) express an inherent inclusive sense when it is associated with the first person.

(8) *dá = nǚ = hé*  
 SIT 1.PST.R=see[3OBJ]=PL.EXCL  
 ‘We (EXCL) saw him/her/them.’

An example with the dual exclusive is given in (9) from Toluca (TOL) Otomi, a variety of Western Otomi (slightly adapted from Lastra 1992: 328). However, because dual is a complex number value in Otomi, at this point in the exposition I will illustrate the remaining marking possibilities of pronominal number with examples in the plural only.

(9) *domáñiníbe yA pháni...*  
 TOL *dó = má = ’winí = ’bé* yi pháni  
 1.PST.R=PURP.MOT=feed[3OBJ]=DU.EXCL PL horse  
 ‘We went to feed the horses...’ (Txt)

The plural of an object is also encoded with the same number enclitics we have in (7-8). This is shown in (10). Notice that for this situation, a doubling of object marking is required at least for SIT Otomi.

(10) a. *dá = nǚ-’-a = ’í = hú*  
 SIT 1.PST.R=see-2OBJ-B=2OBJ=PL  
 ‘I saw you (PL).’

b. *bi = nǚ-g-a = gí = hú/hé*  
 3.PST.R=see-1OBJ-B=1OBJ=PL/PL.EXCL  
 ‘He/she/they saw us (INCL/EXCL).’

Additionally, the verb can only receive one number marker, so when both subject and object are plural, the plural of the subject is encoded by a free pronoun, while the verb indexes the number of the object. This is shown in (11) (Palancar 2009: 261).

- (11) nú = 'i = **hú**      gá = zěngwa = **gí** = **hé**  
 SIT    INTRO=2SG=PL    2.PST.R=visit=1OBJ=PL.EXCL  
 'You (PL) visited us.'

Sometimes there could be ambiguity regarding to which argument the number enclitic makes reference. In (12) from Toluca Otomi, the clitic *hú* could either refer to the subject or to the object (slightly adapted from Lastra 1992: 34).

- (12) *bi-ñāš-ki-hí*  
 TOL    bi = 'ñāš-ki = **hú**  
 3.PST.R=SS/shear.AS-1OBJ=PL  
 'They cut my hair.'<sup>24</sup> (Lit. 'They sheared me.')
- 'He cut our (INCL) hair.' (Lit. 'He sheared us (INCL).')

As for personal pronouns, in Otomi, like in Chichimec in Table 2 above, the same number markers are also used for the building of plural forms. There are no independent personal pronouns; pronominal forms are always enclitics hosted on a set of particles, such as for example the presentational or definite particle *nú* in Table 5. There are various alternative forms for the first and second person in SIT Otomi (Palancar 2009: 342).

#### INSERT TABLE 5 HERE

In Table 5, the forms of the plural are formed on the singular by means of similar number markers, except with the markers =*khú* and =*khé*, which have morphologized as cumulative exponents of first person and plural, inclusive and exclusive, respectively.<sup>25</sup>

Similarly, like in Chichimec, number markers in Otomi are also added to nouns to realize number values of a possessor. This is illustrated in (13), again with a plural possessor.

- (13) a. **ma**      ta<sup>h</sup>ta = **hú**  
 SIT      1POSS    father=PL  
 'our (INCL) father.'
- b. **ri**      nōñö = **hú**  
 2POSS    mother=PL  
 'your (PL) mother.'

Finally, on the syntactic level, the use of plural marking on verbs is required when the subject of the clause is plural. In other words, plural is a morphosyntactic feature required by the syntax for agreement. This is illustrated in the string of clauses of the textual extract in (14) from SIT Otomi (Palancar 2009: 399). In this variety, like in other varieties of Northern Otomi, the use of P&TAM formatives is facultative if the inflectional information can be retrieved from the context. This may be seen in most of the clauses in (14), where the relevant P&TAM formative has been elided as indicated by the parentheses (see Palancar 2009: 191ff for details on the conditions that regulate when such formatives can be dropped). In contrast, not using a plural marker in a similar circumstance (i.e., the context makes it

<sup>24</sup> Here the plural pronoun has specific reference (e.g. 'Peter, Mary and their friends' or 'those men standing over there'). In other words, the reading is not ambiguously impersonal like in English. For the impersonal reading Otomi has a different construction.

<sup>25</sup> These in turn emerged from a combination similar to the form *nú = gí = hú* which underwent phonological reduction of the pronominal clitic, i.e., \**nú = g(i) = hú* > \**nú = k = hú* > *nú = khú*.



‘Then we got up to get ready.’ (Txt)

- b. kwándo dí = né \_\_\_\_ [ga = h<sup>o</sup>h<sup>k</sup>-a \_\_\_\_ = n’á ma tráhé = hé]  
 when 1.PRS.R=want[3OBJ] 1.PRS.IRR=make[3OBJ]-B=one 1POSS suit=PL.EXCL  
 ‘When we want to make our suits.’ (Txt)

## 2.2. The morphological make up of number in Otomi.

In the previous section, I have shown examples with plural forms using the enclitics *hú* and *hé*, which show very little degree of morphophonological variation. In reality, the actual encoding of number in verbs can be complex. There are also Otomi languages with more complex morphophonological rules than others. In this section, I briefly show the case with the plural marking in Huehuetla Otomi (HO), a variety of Eastern Otomi.

To explain how number marking is realized morphologically, a word about verb structure is in order. Like in other Otomi languages, verb stems in Eastern Otomi can consist of a simple monosyllabic root like in (17a), or of a root plus one of 19 different stem formatives (indicated by the plus sign). Some examples are given in (17b).

- (17) a. nǔ ‘see’  
 HO gë ‘roar’  
 ho ‘kill’
- b. hwé + <sup>h</sup>k- ‘love’  
 pú + <sup>h</sup>t- ‘peck’  
 ben + t’- ‘grasp’  
 yä + <sup>h</sup>p- ‘accuse’

In Huehuetla Otomi, each plural morpheme has two allomorphs; indicated in (18).

- (18) {hú} hú, ú ‘PL’  
 {hé} hé, é ‘PL.EXCL’

The allomorphs *hú* and *hé* are the default realization of {hú} and {hé}, because they have a wider distribution (i.e., apart from verbs, they are also used in pronouns and in nouns to mark possessor). With verbs they are selected by lexemes with monosyllabic stems like (19a), as well as with those that have the stem formatives in (19b) and (19c). In the examples, I illustrate it with instances of {hú}, but the same would apply to {hé}. In (19c), the stem formative undergoes a slight phonological adjustment when hosting the number enclitic.

- (19) a. nǔ ‘see’ > nǔ = hú  
 HO b. hwé + <sup>h</sup>k- ‘love’ > hwé + <sup>h</sup>k = hú  
 pú + <sup>h</sup>t- ‘peck’ > pú + <sup>h</sup>t = hú  
 yä + <sup>h</sup>p- ‘accuse’ > yä + <sup>h</sup>p = hú  
 c. ben + t’- ‘grasp’ > ben + t = hú  
 ’e + ng- ‘push’ > ’e + nk = hú

The allomorphs *hú* and *hé* are also used with stems carrying a nasal formative, but here all nasals are reduced to the clusters /mb/ and /nd/ (where the nasal formative is followed by a homorganic excrescent stop /b/ and /d/). The underlying sequence undergoes subsequent metathesis, where <...> stands for the specific location of the consonantal onset of *hu* after the metathesis.

(20)	ho + n-	‘seek’	>	ho + mb = h <sup>u</sup>	>	hom<h>b <sup>u</sup>
HO	tsă + mm-	‘retain’	>	tsă + mb = h <sup>u</sup>	>	tsăm<h>b <sup>u</sup>
	’ă + hm-	‘put someone to sleep’	>	’ă + mb = h <sup>u</sup>	>	’ăm<h>b <sup>u</sup>
	tó + ’m-	‘wait for’	>	tó + mb = h <sup>u</sup>	>	tóm<h>b <sup>u</sup>
	’a + nn-	‘ask someone’	>	’a + nd = h <sup>u</sup>	>	’an<h>d <sup>u</sup>
	tó + hn-	‘push’	>	tó + nd = h <sup>u</sup>	>	tón<h>d <sup>u</sup>

On the other hand, the allomorphs *ú/é* occur before stem formatives with sibilants:

(21)	kă + x-	‘bend’	>	kă + x = ú
HO	tsi + ts’-	‘retain’	>	tsi + x = ú
	’ě + ’ts’-	‘propose’	>	’ě + s = ú

But *ú/é* are also used with a special set of verbs, like the ones in (22), which require a special stem to generate the form of the plural. Notice that the resulting form does not undergo subsequent metathesis like in (20) above, although in principle it could.<sup>28</sup>

(22)	tăh-	/	tămb-	‘win’	>	tămb = ú
HO	pă + d-	/	pămb-	‘know’	>	pămb = ú
	pé + g-	/	pémb-	‘put on the ground’	>	pémb = ú
	zó + f-	/	zómb-	‘talk to someone’	>	zómb = ú
	fě + i	/	fěmb-	‘lash’	>	fěmb = ú

In this section, I have introduced the basics about the morphosyntactic and morphological distribution of number markers in Otomi. I have purposely left examples with dual markers out of the discussion because they represent a more complex case, as will soon become clear in the following sections, where I introduce the different number systems we find one by one, starting with Old Otomi.

### 3. The basic number system in Old Otomi.

In the previous section, I have presented the basics of pronominal number encoding in Otomi, we have seen that number marking encodes number of subject in pronominal forms and in verb agreement as well as number of possessor with nouns. In this section, I introduce the historical system found in Old Otomi. I do this to provide a perspective that serves to understand and evaluate the deviations that have happened in the daughter languages.

While Otomi-Mazahua had already lost the dual value in nominal number from Otom-Pamean (this was seen for example in 9 above), it preserved the dual in pronominal number. The pattern survived into Old Otomi, as illustrated in Table 6 by the subparadigm of the present indicative of the verb *xohnăbate* /’ʃónapa<sub>te</sub>/ ‘teach’ as extracted from Cárceres (1907[1580]: 65, 69).

INSERT TABLE 6 HERE

The marker *wi* /wí/ realizes dual, while *hæ* /há/ encodes plural. Like in the modern languages, when these markers are used with a first person subject, they also convey an

<sup>28</sup> The fact that these verbs cannot have metathesized outcomes (e.g. \**tămh<sup>u</sup>*, \**pămh<sup>u</sup>*, etc.) like the ones in (16) indicates that an alternant such as *ú* is not a merely phonetically conditioned allomorph.

inclusive value. This is by virtue of the existence of dedicated morphemes to realize an exclusive value, like dual exclusive *be* /bɛ́/ and plural exclusive *he* /hé/.

While number marking was obligatory for the first and second persons, it was already optional for the third person. This facultative character was indicated in Table 6 by means of the parentheses and represents a phenomenon that did not pass unnoticed to Cárceres, as he himself points out (1907[1580]: 65, free translation mine) the following:

“[L]a 3ª persona del plural es semejante a la del singular, en todos verbos y por tanto exadjuntis, se a de conocer quando es plural o singular, aunque ay esta diferencia y es que quando todos los que dan supuesto al uerbo se expresa con conjuncion copulatiua que al uerbo preceda entonçes se requiere boz del plural.”

‘The 3<sup>rd</sup> person plural is similar to the singular for all verbs. Because of this, the context dictates when it is plural and when singular. But there is one exception, and this happens when the arguments of the verb are expressed with a conjunction preceding the verb. In such a case, plural marking is required.’

In this way, plural marking is not used in a situation like in example (23) because the plural subject does not appear in any conjoined NP. Here and elsewhere I indicate the absence of a number marker by an underscore. The example in Old Otomi (OO) is taken from Cárceres (1907[1580]: 44), but as with other instances, the conversion into modern Otomi orthography, the glossing and the translation are mine.

(23) *nūhnāpicha nūye apostol nūbucemibucey nūguayximāyāmāhoy nūyahintācha, tīchaya,*  
OO *nūkochāyāy*

nūh = na	∅	pi = <b>k<sup>h</sup>a</b> __	nū = y = e	apostol
INTRO=DEM.SG	REL	3.PST.R=do	INTRO=DEM.PL=PL	apostle
nū = bu	mí = <b>'bui</b> __	nū = gwa	<sup>l</sup> xi-mayamahay	
INTRO=when	IMPF=[3.PRS]be	INTRO=here	HON-earth	
nū = 'ya	hin = ta = kha	ti = kha = ya	nū = k' = o	khāyāi
INTRO=now	NEG=3.IRR=exist	3.IRR=do[3OBJ]=ENCL	INTRO=DEM.SG=HON	person

‘That which the apostles did when they were here on earth, now the people cannot do it.’

In contrast, number agreement with a third person dual or plural subject is used when a conjoined NP subject precedes the verb. Conjoined NPs are indicated by brackets, while the coordinating conjunction is underlined to facilitate recognition. Plural number is shown in (24); dual in (25) (Cárceres 1907[1580]: 65).<sup>29</sup>

(24) *nūko San Pedro xīmēko San Pablo xīmēko San Andres, pnixohmābātehø*

OO	[nū = k' = o	San_Pedro	<u>xi = 'ne = k' = o</u>	San_Pablo
	INTRO=DEM.SG=HON	Saint_Peter	also=and=DEM.SG=HON	Saint_Paul
	<u>xi = 'ne = k' = o</u>	San_Andres]	p<n>i = xahnabate = <b>hu</b>	

<sup>29</sup> Cárceres further points out that the verb does not inflect for the number of the subject when the conjunct bearing the coordinating conjunction follows the verb. This is shown in (i). However, this is a structure that can, nonetheless, be well accounted for as an instance of gapping.

(i) *nūko San Pedro pnixohmābāte xīmēko San Pablo*

OO	nū = k' = o	San_Pedro	p<n>i = <b>xahnabate</b> __	<u>xi = 'ne = [k' = o</u>	San_Pablo]
	INTRO=DEM.SG.III=HON	Saint_Peter	<INTR>3.PST.R=teach	also=and=DEM.SG.III=HON	Saint_Paul

‘Saint Peter preached and also Saint Paul.’

also=and=DEM.SG=HON Saint\_Andrew <INTR>3.PST.R=teach=PL  
 ‘Saint Peter, and Saint Paul, and Saint Andrew preached.’

- (25) *nūko Santa Maria xīnēkanimācābāgi pinbuæ biban Belen*  
 OO [nū = k' = o Santa\_Maria xi = 'në = k'a ní makä-bätsi]  
 INTRO=DEM.SG=HON Saint\_Mary also=and=DEM.SG.III DEM.SG.3POSS ?-child  
 pi-n = 'bubi = b = an Belen  
 3.PST.R-INTR=live.AS=DU=LOC.P Bethlehem  
 ‘Saint Mary and her child lived in Bethlehem.’

The pronominal system of Old Otomi is given in Table 7, where all pronominal forms are based on the presentational particle *nū* (*nū*) (Cárceres 1907[1580]: 50).<sup>30</sup>

INSERT TABLE 7 HERE

In Table 7, the forms for the third person are built on two demonstratives, singular *næ* (*nū*) ‘that’ and *yæ* (*yū*) ‘those’. The chart illustrates the lack of regular number for the third person. Interestingly, Western Otomi, which as I show has preserved to date the historical situation of Old Otomi, also has dual and plural pronominal forms for the third person, but these are not based on a demonstrative. This situation suggests that the same happened in Old Otomi, but was not recorded by Cárceres.

#### 4. The number system in the modern Otomi languages.

The historical number system of Old Otomi has undergone a considerable restructuring in most of the modern languages. In this section, I introduce the different outcomes one by one. We can start with Western Otomi, which is most conservative in this regard, having preserved the historical situation almost intact.

##### 4.1. The number system in Western Otomi.

Western Otomi is a dialectal continuum of very different varieties, which include Toluca Otomi; San Felipe Otomi; Temoaya Otomi; San Pedro Otomi and Jiquipilco Otomi. In the pronominal system of Toluca Otomi, the variety that I take here to be representative of the language, there are regular dual and plural marking for all persons. This is shown in Table 8 (Lastra 1992: 19). Notice that the dual and plural forms for the third person are based on a genuine third person pronoun (*gégé*) and not on a demonstrative pronoun like the attested forms in Old Otomi in Table 7.<sup>31</sup>

INSERT TABLE 8 HERE

Interestingly there is more to the third person dual and plural forms in Table 8 than meets the eye. In reality, such pronominal forms can only be used when they refer to human beings. In other cases, the number enclitics cannot be used. The excellent textual material in Lastra (1992) provides us with plenty of information about this semantic distribution.

<sup>30</sup> In Table 7, I have not included predicative forms such as *cogueque* (*ko=geh=ke*) ‘it’s me’, which are introduced by means of the focus particle *co* (*ko*) and the identificational particle *gue* (*ge/geh-*), and require special pronominal forms (i.e., *ke* ‘I’).

<sup>31</sup> The form *gégé* of Toluca Otomi is already attested in the predicative form for the third person in Cárceres, i.e., *cogueque* (*ko=ge=ge*), and stems from a lexicalization of the identificational particle *gue* (*ge/geh-*) plus the genuine third person form (i.e., *ge* ‘he/she’).

In Western Otomi, number agreement with a third person dual or plural is conditioned by the semantics. The conditioning most probably dates back to Old Otomi. In the animacy hierarchy, only personal pronouns and human subjects can trigger number agreement on the verb, the rest of the nouns in the hierarchy do not. This is illustrated in (26) with two instances: one is an inanimate subject, the other is an animate but not human (Lastra 1992: 347, morphemic analysis, glosses and English translation is mine).

- (26) *y<sub>A</sub> cithā nīhī bī ni ŷa hīci este māhke šo indici y<sub>A</sub> ngú*  
 TOL yu tsi-thǎ 'nīhī 'bu(=\***hu**)=ni 'a hītsi,  
 PL DIM-maize also [3.PRS]be.located.AS(=\*PL)=there LOC.P loft  
 'The corn-cobs are also there on the loft.'  
 este mā<sup>h</sup>ke xo i=ndutsi(=\***hu**) yī ngú  
 even so 3.PRS=feed.on(=\*PL) PL rat  
 'But even so, the rats eat them.'

With animals, number agreement is only possible with reciprocal verbs, as shown in (27), but here again it is optional.

- (27) *šī to ǎtébík ǎ ma r<sub>A</sub> kʔi iʔó ŷa hǎi, porke dantuhí*  
 TOL xi=to='ute-bí=k'ú ma rī k'ú i='ó(=\***hu**) 'a hǎi,  
 also=1.PST.R=make-3DAT=3PL other INDF.SG REL 3.PRS=be.down(=\*PL) LOC.P ground  
 'And I also made those other (nests) that are below on the ground.'  
 porke da=n-tü=**hu**/n-tühn-i\_\_  
 because 3.PRS.IRR=MIDD-fight.AS=PL/MIDD-fight-F  
 'Because they (the hens) quarrel (with each other).' (Lastra 1992: 344)

With humans, agreement is further restricted to subjects with specific referents in the discourse. This is illustrated in (28), from San Felipe (SF) Otomi, where the plural is used when the speaker is talking about a specific group of people (i.e. her relatives), notice the additional plural as possessor. Also in (29), where the referent of the noun *khā'nī* 'indigenous people' is also concrete (i.e., notice for instance the use of the deictic demonstrative). Similarly in (30), where the speaker refers to her parents. Further on in this example, the speaker switches to a generic reference, and consequently stops using plural agreement on the verb.

- (28) *nin, te ci di ʔbħtīhī nīr nguhī, te ʔi pæhmī*  
 SF nin, te tsu di='buh=ti=**hu** nū=r ngü=**hu**,  
 no what! little DUR=[3.PRS.IRR]be.AS=DEL=PL DEM.SG.3POSS=SG house=PL  
 'No, they are hardly ever at their home.'  
 te i=pēh=**mu**  
 what! 3.PRS.R=work.AS=PL  
 'They do all kinds of work.' (Andrews 1993: 83)

- (29) *yī khā'nī mí ʔətīhī mbaškhwa cada ocho dia, šti dətī ĩr marte, geh nī mí ʔətīhī mbaškhwa nī*  
 SF yu khā'nī mí='oti=**hu** mbaxkhwa cada ocho dia,  
 PL person IMPF=[3.PRS.R]do[3.OBJ]=PL feast every eight day  
 'These people used to have fiestas once a week.'  
 x=tí=dət=**hu** ur marte,  
 PRF=3.PRS.IRR=SS/find[3.OBJ]=PL SG Tuesday  
 'Whenever a Tuesday came.' (Lit. '(When) they'd find a Tuesday.')

geh = nu                      mí = 'oti = **hu**                      mbaxkhwa = nú  
 IDENT = DEM.SG   IMPF=[3.PRS.R]do[3OBJ]=PL   feast=there  
 'They were then throwing a party.' (Andrews 1993: 74)

- (30) *asta bizáħí yΛ naštanÁ, bizáħí kwalkiera yΛ páší yí šo minuhí. Ta šo dúnthi yΛ khání bidunÁ*  
 TOL asta bi=zá = **hu**                      yí naxtä = 'ní,  
 even 3.PST.R=SS/eat=PL   PL raw.prickly.pear=CIT  
 'They (my parents) even ate raw prickly pears.'  
 bi = zá = **hu**                      kwalkiera yí páxí yu xo mí = nu = **hu**.  
 3.PST.R=SS/eat=PL   any                      PL grass   REL well   3.IMPF=see[3OBJ]=PL  
 'They ate any herb that they well saw.'  
 ta xo dúnthi yí khání bi = dü \_\_ = 'ní  
 even well many PL person 3.PST.R=SS/die=CIT  
 'Many people indeed died, they say.' (Lastra 1992: 360)

When the plural subject is non-specific, that is, when it does not refer to specific persons, the verb does not show number agreement. As I have pointed out, this may be already seen in the last clause in (30), where we find the noun for people used as a generic in the last clause. The point is further illustrated in (31) where the speaker is talking about women in a rather general way. A particularly interesting example is (32), where the speaker portrays her five brothers as an undifferentiated collective. Had she used the plural marker *hú*, she would have implied that all the brothers hit her together as a group, when in reality, regardless of how unpleasant the experience must still have been, she implies that she was hit by one or two now and then.<sup>32</sup>

- (31) *pe maħhamá bastante misufri yΛ běħñi*  
 TOL pe máħhamá bastante mí = sufri \_\_ yí 'běħñi  
 but time.ago rather 3.IMPF=suffer PL woman  
 'But time ago women suffered a lot.' (Lastra 1992: 361)

- (32) *...maħke mi ħngí yí maħdá...*  
 TOL má<sup>h</sup>ke mí = 'un-gí \_\_ yu má 'ídá  
 although 3.IMPF=hit-1OBJ PL 1POSS brother.of.woman  
 'Although my brothers hit me.' (Lastra 1992: 332)

On the other hand, like we saw above in (24-25) for Old Otomi, in Western Otomi number agreement is also required with a conjoined NP subject. This is shown in (33).

- (33) *kar David kor Lasaro ci ħñəħwi*  
 SF [ka = r                      David ko = r                      Lasaro] tsi- 'ñoħo\* (= **wí**)

<sup>32</sup> There is only one example in Lastra's (1992) extensive corpus that shows number agreement with an apparent non-specific plural subject. This is given in (ii). Whether the speaker had some specific people in mind is not known.

- (ii) *pū xo dañūtuhú damábihúyí 'wú damákáħúya 'wú*  
 TOL pū xo da = ñutu = **hu**                      da = má = bí = **hu** = yí = 'wú  
 maybe so 3.PRS.IRR=SS/get.in.AS=PL   3.PRS.IRR=PURP.MOT=SS/steal[3OBJ]=3PL=then  
 'It may be that they got in to steal it (the food) then,'  
 da = má = ká = **hu** = yí = 'wú  
 3.PRS.IRR=PURP.MOT=bring[3OBJ]=3PL=then  
 'And then take it.' (p. 323)

DEF.SG=SG David with=SG Lazaro [3.PRS]DIM-man=DU  
 ‘David and Lazarus are little boys.’ (Andrews 1993: 37)

The conjoining structure in (33) represents an instance of the widely attested comitative coordination (Schwartz 1988, Stassen 2000) and thus remains uncontroversial from a cross-linguistic point of view.<sup>33</sup> There is, however, another conjunctive construction found in all Otomi languages which is treated by Palancar (2012b) as an instance of ‘split conjunction’. Such a construction is typologically much rarer and more interesting for our present purposes, as it displays a number of intriguing restrictions regarding number agreement. Because of this, it deserves to be studied separately in the next section.

#### 4.2. Number and split conjunction

All Otomi languages have a special conjoining construction dedicated to the expression of comitative and reciprocal semantics involving human beings. The construction in question is syntactically interesting because of the three following features:

- (i) The conjoined subject NP is always a split one, that is, the two conjuncts appear in different positions in the clause: one is topical subject and occurs in the typical position of a subject (whether the language is SVO or VOS); the other conjunct appears in the typical position of the object.
- (ii) The construction is restricted to intransitive verbs.
- (iii) The verb must show resolved number agreement: dual or plural.

The construction is illustrated in (34) in Western Otomi in the variety of Toluca Otomi. In the examples, I further show that number agreement is obligatory.

(34) a....gégé šo biʔiniwí kʔA rA prima khwé  
 TOL [gégé] xo bi=’ini\*(=wí) [k’i rí prima\_khwé]  
 s/he so 3.PST.R=PLAY=DU DEF.SG SG female.cousin  
 ‘She was playing with her cousin.’ (Lastra 1992: 328)

b. domá a múlínú domébé na maámíga  
 TOL [pro] dó=má a múlínú  
 1.PST.R=SS/go LOC.P mill

dó=mé=’bé/\*ma\_\_\_\_\_ [’na mä ámíga]  
 1.PST.R=SS/go.DU=DU.EXCL//SS/go one 1POSS friend  
 ‘I went to the mill with a friend.’ (*ibid.* 349)  
 (Lit. ‘I went to the mill, I went with a friend.’)

Example (34a) involves two singular NPs, and the verb has resolved agreement in dual number. Notice that the two conjuncts appear in two different positions. Example (30b) is similar to (34a), but here we have an instance of the clause combining construction involving the juxtaposed clauses we saw in (16) above in section 2.1. This construction requires a coreferential subject, which in this context is the first person. The subject of the second clause *dó mé’bé ’na mä ámíga* ‘I went with a friend’ is obligatorily elided; that is, it cannot have an explicit subject personal pronoun like in (34a), which in this case it would have been *nugó* ‘I’. Had the speaker wanted to add such a pronoun, she would have had to place it

<sup>33</sup> In Old Otomi, the coordinating conjunction *xi (ma) ’ne* ‘and’ (Lit. ‘also (other) and’) was replaced by the loanword *ko(n)* from Spanish, although not entirely, depending on variety.

before the first clause *do má a múlínú* ‘I went to the mill’ attending to the syntactic restrictions of the construction. Example (34b) illustrates that the language is pro-drop (the elision of a pronoun is indicated by *pro*).

This conjoining construction is old as it is also found in Old Otomi and it is even shared by Mazahua (Stewart 1966: 76, 108) which split from Otomi around 500 AD. The only two examples to be found in Cárceres (1907[1580]) appear in (35).

(35) a. *tāmévike Pedro*

OO [pro] ta = me = wi[ = k’e Pedro]  
 3.PRS.IRR=ss/go.DU=DU=DEM.SG Peter  
 ‘He may go with Peter.’ (Cárceres 1907[1580]: 94)

b. *cobānyovike Pedro*

[pro] ko = ba = n-’yo = wi[ = k’e Pedro]  
 2.PRS.IRR=TRANSLOC = INFL.INTR-walk=DU=DEM.SG Peter  
 ‘You (SG) will go away with Pedro.’ (*ibid.* 116)

As it will become clear in the following sections, this conjoining construction has played a very significant role in the preservation of the old number system in the modern languages, which have elsewhere innovated considerably compared with the original situation. The result is an interesting mixture of number systems occurring within one language, which is rarely seen typologically. I will introduce the different situations one by one, moving anticlockwise in the dialectal compass for convenience. In other words, I will first present the system of the East, then of the North, and finally that of the South.

### 4.3. The number system in Eastern Otomi.

In the previous section, we have seen how Western Otomi preserves the number system of old times which consists of three values: singular, dual and plural. Number agreement is used with all persons in conjoined structures, whether of the coordinating type in (33) or of the split type in (34). Number agreement is a morphosyntactic requirement with the first and second person, but with the third person it has become a morphosemantic feature because it is restricted to subjects who are human and specific.

The first deviation from this original situation is the total loss of number in the third person. This happens in all other Otomi languages, but we will concentrate first on the situation found in Eastern Otomi, which bears the closest structural similarity to that of the West seen before.

Eastern Otomi, also known as Highlands Otomi, is also a dialectal continuum which includes the varieties spoken in Huehuetla (San Gregorio and San Antonio el Grande); Tenango de Doria; Texcatepec; and other outsiders like Tulancingo Otomi and San Pablito Otomi. The personal pronouns of Huehuetla Otomi, the variety of Eastern Otomi I take to be representative of the language, are given in Table 9. Here we have a contrast of neutral vs. emphatic forms for the first person. For the second person, the contrast is based on a private space: formal vs. intimate. As for number, the third person pronouns are different in that there is no dual pronoun, and the plural is not regularly built on the singular form, (Voigtlander and Echehoven 1985[1979]: 271).

INSERT TABLE 9 HERE

In Eastern Otomi, the number system has a healthy contrast of dual and plural values for the first and second person, but verb agreement with a third person subject is no longer

sensitive to number, at least in the default situation. This situation is shown both in (36a) and in the coordinating construction in (36b) with the conjunction *'ne* 'and'. These examples illustrate that the verb cannot receive number agreement with a plural or dual third person subject, regardless of whether the subject referent is human, specific, or whether it appears in a coordinating context. In contrast, the conversation in (37) illustrates that number agreement is obligatory with a first and second person dual or plural (Voigtlander and Echevoyen 1985[1979]).

(36) a. *'ne ga'tho yo xitsu, ga'tho yo t'uhni bi = n-'unb-i\_/\*n-'unb-a = hu*  
 HO and all PL woman all PL child 3.PST=MIDD-suffer-F/MIDD-suffer-B=PL  
*nange ra tsui Ø bi = n = kha*  
 with SG fight REL 3.PST=INFL=exist  
 'All women and children suffered because of the war that was'. (p. 301)

b. *bi = mba\_/\*mbe = wi [ra xuwa 'ne ra zigo]*  
 3.PST=SS/go//SS/go.DU=DU SG John and SG Francisco  
 'John and Francisco went (there).' (p. 56)

(37) *-ha gi = xu\*( = wi)?*  
 HO INT 2.PRS=cut.wood=DU  
 'Are you (DU) cutting wood?'  
*-di = xu\*( = 'be) thä?*  
 1.PRS=cut.wood=DU.EXCL indeed  
 'Indeed we (DU) are cutting wood'  
*-'darbu da = n = xu\*( = hu) = 'bu*  
 then 1.PRS.IRR=INFL.INTR=cut.wood=PL=so  
 'Then let's cut wood together.' (p. 149)

The new situation is summarized in Table 10 with the subparadigm of the present realis of the verb *'yo* 'walk', as extracted from Voigtlander and Echevoyen (1985[1979]: 98, 147ff).

INSERT TABLE 10 HERE

Interestingly, however, number marking for the third person has not been fully lost. It survives in the split conjunction construction, where the use of number agreement is obligatory, as illustrated by the ungrammaticality of its elision in (38), where example (a) is plural and (b) dual. Notice that Eastern Otomi is a VOS language, and that the conjuncts in (38) do not represent a contiguous conjoined NP by juxtaposition, but two different NPs in different syntactic positions in the structure. The topical conjunct appears in the position of the subject, hence the translation (Voigtlander and Echevoyen 1985[1979]).

(38) a. *bi = n = tsi-hme\*( = hu) [yu xambate][ = 'u yu xadi]*  
 HO 3.PST=INFL/INTR=ingest-tortilla=PL PL teacher=DEF.PL PL student  
 'The students ate with the teachers.' (p.307)

b. *'buh = mi/\*'bu-i [rá ndombe] [nu ra t'uhni]*  
 [3.PRS]live.AS=DU/live-F SG.3POSS grandmother DEF.SG SG child  
 'That child lives with his grandmother.' (p.307)

All other languages that have lost number in the third person behave like the Eastern Otomi in this respect. The maintenance of number agreement with a third person in the split

conjunction construction serves two purposes. One is to indicate resolved agreement with the two NP conjuncts involved, so that the action is seen being carried out by both entities acting as a group. The other purpose is to serve as a very convenient morphosyntactic flag for the hearer to process that the speaker is in fact using this specific conjoining structure. In other words, when a verb has a plural subject of third person and appears with number markers, it is irrevocably an instance of split conjunction. If it has no number agreement, it is not. This is shown by the contrast between (39-40). In example (40) -an instance of split conjunction- only the topical subject is present on surface structure; the other conjunct expressing the comitative participant is inferred from context. This is indicated by *pro* (Voigtlander and Echegoyen 2007).

(39) xóngu yò khä'i i=yä\_\_  
 HO many PL people 3.PRS=talk  
 'Many people are talking.' (p.102)

(40) [xóngu yò khä'i] i=yä=hu [pro]  
 HO many PL people 3.PRS=talk=PL  
 'Many people are talking with him/her/them.' (p.102)

In both the Western and the Eastern languages, dual and plural are healthy morphosyntactic values. In the rest of the languages, dual is a disappearing value, but in this respect, its treatment has been very different in the North and the South. Let us see first what the situation is in Northern Otomi.

#### 4.4. The number system in Northern Otomi.

Northern Otomi is a large dialectal continuum of closely related varieties including San Ildefonso Tultepec (SIT) Otomi; Santiago Mexquititlán Otomi; Mezquital Otomi; and other small varieties such as Chantepec Otomi; Tolimán Otomi; Acambay Otomi; and possibly the isolated variety spoken to the East in Ixhuatlán de Madero.

4.4.1 *The dual in the split conjunction construction.* In Northern Otomi, the old dual markers survive in the split conjunction construction, where their occurrence is obligatory. Example (41) is from the variety of SIT Otomi, which shows an SVO word order.

(41) [nú='í=gé] gá=n-thé\*(=wí)[=r Zü'we]  
 SIT intro=2=2SG 2.PST.R=MIDD-meet=DU=SG Devil/worm  
 'You came across with the Devil.' (Palancar 2009: 545)

In (41), the number marker *wí* on the verb conveys resolved agreement with the two NPs referring the sum of the two individuals, i.e., the hearer and the devil. In this respect, it is naturally expected that we gloss it as a dual and after all, the marker is cognate with the dual markers found in other languages we have seen.<sup>34</sup> However, in other cases the actual sum of individuals included in the set referred to by the agreement marker is more than two. This is illustrated in (42), where it makes reference to three individuals, or more significantly in (43), where the mason masters referred to are interpreted as being a handful of them, although not many. In the examples, I indicate again the reference to an elided conjunct NP by means of *pro*, and when appropriate I use a subscript letter *i* and *j* to track the anaphora to a particular referent (Palancar 2009: 560).

<sup>34</sup> In section 4.4.2, I further show that the dual is a number value characteristic of specific male register.

(42) nú = ya bötsi<sub>j</sub> bi = ma ba = tsú = r mǎle<sub>j</sub>  
 SIT DEF.PL=PL child 3.PST=SS/go 3.PST.CISLOC=reach.up.to.B.3POSS[3OBJ]=SG grandmother  
 pa [pro<sub>i</sub>] bi = m-'uh = wí [pro<sub>j</sub>]  
 PURP 3.PST=SS.MIDDL-live.AS=DU  
 'The (two) children went to reach up to their granny to live with her.'

(43) kó ya [pro] m-pöh = wí [nú = ya mástro]  
 SIT because P [3.PRS.R]MIDD-know.AS=DU DEF.PL=PL master  
 'Because he gets on well with the mason masters.'

I take examples (42-43) as evidence that the old dual markers in the split conjunction construction of Northern Otomi have been reanalyzed as exponents of a paucal number value (the reason why I still gloss it as dual will become clear below in section 4.3.1). In fact, plural markers are only used in the construction when the number of individuals is a large group of people. In other words, plural has become a plural of abundance or a remote plural, like in (44), where the members of the family are interpreted as forming a large collective of individuals (Palancar 2009: 560).

(44) yó\_kreo\_ké [pro] bi = gó = hū [nú' = yá fámiliá]  
 SIT I.THINK.THAT 3.PST=SS/remain.AS=PL DEF.PL.POSS=PL.3POSS family  
 'I think they stayed with their family.'

Outside the split conjunction construction, however, dual forms never appear in the elicitation of inflectional paradigms of verbs, and there are no dual forms of pronouns. This is illustrated in Table 11, which completes the information partially introduced in Table 5 above.<sup>35</sup> Here, like in Eastern Otomi in Table 10, the plural form of the third person is a demonstrative and is not based on a regular plural, i.e. there is no such a form as \*nó'óhú for an equivalent of 'they'.

INSERT TABLE 11 HERE

Similarly, the typical paradigm of a verb reflects a singular-plural opposition, which is shown in Table 12, illustrated with the subparadigm of the present realis of the verb 'yo 'walk'.

INSERT TABLE 12 HERE

In this light, the number system in the Northern language is complex because it is a hybrid one. Outside the split conjunction construction, the language has a basic singular-plural number opposition and only for the first and second person. In contrast, in the split

<sup>35</sup> Similarly, there is no dual of possessor. The only context where dual is still used associated to a noun is a nominal predication construction where a proper noun is used to predicate the identity of namesakes between two referents, as illustrated in (iii), where the proper name *Tasya* 'Anasthasia' functions as a nominal predicate with the meaning 'be called Anasthasia'. The use of dual here is related to the use of number of possessor.

(iii) ma = ga = hong-a = ma Tásya = 'bé  
 SIT IMM=1.PRS.IRR=look.for[3OBJ]-B=1POSS Anasthasia=DU.EXCL  
 'I'm going to look for my namesake Anasthasia.'

conjunction construction, number marking for the three persons is obligatory and here the historical dual markers work as paucal markers, while the same plural markers in Table 12 are only rarely used, and when they are, they convey a plural of abundance. This situation has made some authors analyse the historical dual markers in the split construction as associative morphemes (Ecker 1966, Hess 1968), mainly because the construction is used to convey comitative semantics. In the next section, however, I show that dual still survives as a number value in Northern Otomi, making the proposed treatment as associative markers impractical or unnecessary.

*4.4.2 Duals conditioned by register.* Languages often keep treasures from us, only to reveal them once we hit lucky at where they lie hidden. For instance, none of the main references of Mezquital Otomi, the widespread variety of Northern Otomi, such as Bartholomew (2004) or Hess (1968), an often-cited work used in *The World Atlas of Language Structures* (Dryer and Haspelmath 2011), mention dual as an existing number value in this language. However, a closer look at natural texts reveals that there is again more to the dual in this language than meets the eye.

In Northern Otomi, the old dual has become a number value restricted to a very particular register. Dual can only be used among grown-up men, and here the speaker uses it to portray actions that he and his friend can carry out together as mates. By doing so, he enhances comradeship between himself and his friend.<sup>36</sup> In this context, the use of dual is optional and alternates with plural, which is otherwise obligatory. As the use of dual is motivated by the pragmatics of the situation at hand, it is no longer a morphosyntactic feature value required by the syntax in these languages.

As an illustration of this male register, consider the textual extract in (45). The text comes from the book *Etnografía Otomí*, written in Mezquital Otomi by Salinas Pedraza, himself a native male speaker. In particular, the extract is from a story about two merchants (A and B) who have to overnight in a forest, and decide to sleep in a cave, where they would later come across a monstrous snake that will devour one of them. The piece of text features their conversational exchange at the point when they decide to go and sleep in the cave. Notice that there are eight instances in (45) where a non-singular first person form is used. Here dual alternates with plural half of the times (Salinas Pedraza 1983: 138).

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<sup>36</sup> Salinas Pedraza (1983: 116-117) gives some illustrative ethnographic examples of typical Otomi male camaraderie interaction, which involve teasing and sexual puns.

(45)

MEZ	<i>N'a di ge'u bi 'ñeembä rä ñ'owi:</i>		One of them told his comrade:
A	–“te gä 'ot'wi, ñ'o? bi nxüi ha hindi handwi rä 'ñüü; xä nts'uni, maa grä tahuwa ha yä t'oho”, bi 'ñeembä to'o mi ñ'owi'na	DU	–“What shall we do, man? It's dark and we don't see the way; it's dangerous, we could trip here in the woods”, he said to whom he was walking with, they say.
B	–“häü, ñ'o” – bi dädi'ä män'a'na –		–“Yes, man” – the other one answered –
A	–“te gi mäa gä honhu habu gä kohwi? xtä hayaats'i, gä 'apäwi rä zi Daada rä mäkä 'ñüü män'aki” – di ñ'eembi'na	PL	–“What do you say (if) we find where we could stay? In the morning, we'll pray God that he stretches the way again” – he said to him, they say.
B	–“di pääka habu kha n'a rä kuts'i, kha dä za gä 'äähuni yaa hingä yaabu mädeewatho”	DU	–“I know where there's a cave, where we can sleep it's not a long distance walk.”
A	–“maaha'mu” bi 'ñeengä nu'ä män'a'na	PL	–“let's go then” he said to the other one, they say.

In this register, dual is perceived as a grammatical token to increase the degree of social symmetry among two men. It is not found in the discourse of women, who in similar circumstances would only use the plural, never the dual, and it is never used by a minor when addressing an elder. In this respect, consider for instance the extract in (46), which comes from a story told by the same author, but this time about himself and his own father. Notice that plural is used throughout the story when the speaker, in his role of son, is recounting the story, but dual is used in the words said by the father when he is addressing the speaker to suggest the two of them should quickly go home together. The use of dual conveys in the mouth of the father a sense of bonding between father and son (Salinas Pedraza 1983: 122).

(46)

MEZ	<i>Ndi ñ'oo'mee mä daada xki meengä rä theex'uada n'a rä xeni rä thuuhu Nääxt'eei. Ha tsukhee rä nduthe rä thuuhu. Mi 'eengägi mä daada:</i>		I was walking with my father coming back from cutting maguey at a place called Naxt'ey.
Father:	–“ntihi, ñ'o, gä tsoni gä ñunui bi ndee” –'eenä.	PL	Thirst and hunger had gotten us My father said to me: –“run, man!
	<i>Ndi 'rañhee yä kati, ya hñee pa gä maahée rä 'mefi. ha pa gä penkhee mä ngühee. Dä tsoqhee geetuä ha n'a rä hñe. Nde kha maagä tsohee ha rä hñee Nt'agi, nguu xä dä nk'axee bi ungä n'a ndä mfoote pa maa xä mut'a mä daada.</i>	DU	(so that) we get home and eat in the afternoon” – he said We crossed the country, the cannons so that we'd go to work so that we'd return to our home We arrived to a creek. Just as we were entering the cannon of the Pantheon when we were looming up there it (the rattle snake) gave a great leap to bite my father.





After the reanalysis of dual markers as plurals, Tilapa Otomi obtained some mismatches in the otherwise regular assignment of semantic value to exponents. While the old dual marker *'mbé* becomes an exponent of plural exclusive of first person, the old regular dual *wí* now has two functions: one is to serve as dual inclusive for the first person, but another is to be plural for the second and the third persons (in the latter case only within the split conjunction construction). Similarly, the old regular plural *hú* has become a dedicated plural inclusive of first person.

#### **4.6. Summary of the number system of Otomi.**

Up to this point, we have seen that the original number system of Old Otomi based on a singular-dual-plural value opposition underwent considerable restructuring in the modern languages except in Western Otomi. A summary of the outcomes of this restructuring is given in Table 17.

INSERT TABLE 17 HERE

As indicated in Table 17, Western Otomi is the only modern language which has preserved the situation of Old Otomi. Northern and Southern Otomi are more innovative. The Southern languages have lost dual number all together; the old dual markers having been reanalysed as exponents of plural number. In Northern Otomi, vestiges of the dual survive in male speech and in the split conjunction construction where the old dual works as a paucal now. Eastern Otomi shows a mixed situation, leaning towards the old system. In the next section, I will discuss these outcomes in the light of similar trends found elsewhere to understand their typological relevance.

#### **5. Discussion: The evolution of the number in Otomi.**

In this paper, I have shown two interrelated phenomena in the grammar of number in Otomi: one phenomenon involves subtleties in the distribution of number agreement in verbs; the other one involves the loss of the dual as a morphosyntactic value in the number system of some Otomi languages.

As for the first phenomenon, we have seen that Western Otomi has preserved the historical situation present in Old Otomi based on a singular-dual-plural opposition. This situation is typologically close to the one we can still observe in the Pamean branch of Oto-Pamean. In Western Otomi, however, agreement is only possible when the referent is human and specific, as shown in section 4.1. In contrast, all other Otomi languages have lost number agreement with a third person subject except in the frame of the special conjunctive construction I called 'split conjunction' presented in section 4.2, which is used to convey comitative semantics. In such a construction, number agreement with a third person subject is obligatory.

On the other hand, while the dual remained a healthy morphosyntactic value in the syntax of both Western and Eastern Otomi, as shown in section 4.1 and 4.3, respectively, in Northern Otomi and in the Southern languages it got dramatically weakened. There is no evidence that this weakening was contact induced, and since it yielded very different outcomes, we can safely claim that the loss of the dual in the different areas of the family took place as a completely independent process which happened in a relatively short span of time (see section 2 for a brief discussion).

The loss of dual in Otomi displays a number of unreported developments, it informs us of intriguing traces left behind in its disappearance, and more importantly, it represents a case

where a variety of different possible scenarios happened within very closely related languages.

In Northern Otomi, dual became a facultative number value. Although facultative duals are well-known in the literature, discussed in Corbett (2000: 42ff), they commonly involve nominal number only, like in Slovene (also in a number of modern Arabic dialects, see Blanc 1970). What is typologically significant about the facultative dual of Northern Otomi is its distribution and usage. As for its distribution, it is not associated with nouns, but with pronominal number, and more specifically it is only found in verbal agreement (i.e., the language does not have dual personal pronouns). As for usage, dual is a facultative value restricted to a specific male register where it is used to enhance partnership and camaraderie between two men.<sup>38</sup> This was shown in section 4.4.

In this connection, the use of dual in this language, conditioned as it is by the pragmatics, should also be understood as involving a subtle change in the meaning of the value which has not been reported to my knowledge. Here dual is not only used as a result of a computation involving the formula ‘one person plus one person equals two people’, there is more to it: the two individuals involved are perceived as forming a unit of two friends who act together as a team. Additionally, this duality is also gendered, that is, it can only involve two males, and they should be of equal social status, i.e. they stand in a symmetrical relation to each other. A question remains: How this new sense evolved in the dual of Northern Otomi? I suggest that the preservation of dual in the split conjunction construction could serve as a possible scenario for this semantic development.

The split conjunction construction is used to convey comitative semantics involving two human subjects (or human-like entities, e.g. deities). In other words, the construction is used to convey common acts of companionship such as ‘I ate with you’, ‘the man came along with the priest’, etc. framed in a conjunctive frame such as “I ate-DU you” or “the man came-DU the priest”, where the two conjuncts appear in different positions in the clause, hence the split. This construction cannot be used to encode states of affairs involving inanimates such as ‘the knife lies with the fork’ and not even events involving animals such as ‘the man went away with the dog’.<sup>39</sup> This is the type of semantics the construction bears in all Otomi languages, and I propose it had a bearing on the meaning of dual.

Dual is the default value in this conjoining construction; plural is rarely used because acts of accompaniment prototypically involve just two individuals. One likely scenario to account for how dual became a sign of male camaraderie is to propose (i) that the semantics of companionship, proper of split conjunction, percolated to the uses of the dual outside the construction when the dual was still a healthy value; but (ii) that this development only happened in the speech of male speakers, who would have used it to establish symmetrical male bonding with other men of their own age within the speech community. In contrast, as women rarely establish symmetrical bonds with other women, they did not use it. For example, tradition has it that Otomi newly-wed women must move away from their own homes to live with their in-laws, and this situation compels them to establish new social bonds with the women of their new family. Such bonds are commonly non-symmetrical.<sup>40</sup>

In this sociolinguistic context, speakers may have strongly perceived that the dual have come to mean something else and much more subtle than just two people. Consequently, this

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<sup>38</sup> We only have examples available in the literature with the first person, but it could be expected that the dual can also be used for the second person, although less frequently or adding different connotations.

<sup>39</sup> Unless the situation described involves humanized animals as if they were humans, such as in folk tales of the type ‘the turtle walked along with the coyote’.

<sup>40</sup> For anthropological information about Otomi women's daily life see Molinar Palma (1997) or Van De Fliert (1988).

perception gave rise to its loss in usage by the linguistic community at large in broader situational contexts, while it got progressively relegated to a specific type of male speech, motivated by specific circumstances. In this way, as the meaning and usage of the dual had changed, the old plural morphology took over its morphosyntactic function.

But as the dual was becoming a token of male register in Northern Otomi, within the split conjunction construction itself, the old dual forms survived. However, they underwent another semantic change by virtue of which they were no longer perceived as exponents of dual semantics *per se*, but as exponents of a paucal number value. This change in meaning may have been motivated again by the common situation that an accompaniment situation commonly involves two individuals, and as dual was losing its morphosyntactic function outside the realm of the construction, it also opened the possibility that its semantic reference could become more flexible, incorporating also instances of three or more people, as long as the sum of the individuals involved was only a handful. This new change forced the semantics of the old plural markers to be reinterpreted as exponents of a plural of abundance within the same conjunctive frame. This resulted in a hybrid number system for the same language: where the default case has a singular-plural opposition, there is singular-dual-plural for the specific register of males, and paucal-plural for the conjoining construction.

In this scenario, the dual became a paucal, which appears to be a rather rare development according to Corbett (2000: 25); the notorious sources for paucals being trials (e.g. the Malaitan languages spoken in the Solomon Islands, Simons 1986: 33). The only example pointed out in Corbett's sample is a small number of Arabic dialects, presented in Blanc (1970), and this case only involves nominal number. Another instance, also involving nominal number, is the odd case inflection of nouns modified by numerals 2 to 4 in Russian. Traditionally interpreted as a genitive singular, Corbett (2012) prefers to treat this inflection as the 'adnumerative case'. The adnumerative, shown in (53a), contrasts with the use of the genitive plural with numerals 5 and above, as in (53b).

(53) a. *dva*                      *žurnal-a*  
 RUSS    two.M.NOM/ACC    journal-ADN  
           'two magazines'

b. *pjat' žurnal*<sup>41</sup>  
       five    journal(GEN.PL)  
       'five magazines'

What is crucial in this scenario is that the form realizing the adnumerative in (53a) is the vestige of the old dual, which got lost in Slavonic except in Sorbian and Slovene. One possible interpretation for this change involves dual number first being reanalysed semantically as a paucal, covering reference from two to four entities in the world, just like in Northern Otomi. In Russian the old dual was confined within the numeral modification construction; in Northern Otomi with the specific frame of the split conjunction construction.<sup>42</sup>

As dual was being weakened in Northern Otomi, in the isolated languages of the South dual was reanalysed as a plural, but here, the change involved the subsequent loss of

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<sup>41</sup> For the inflectional class to which *žurnal* 'magazine' belongs, there is syncretism between the nominative singular and the genitive plural.

<sup>42</sup> Another possibility is that dual was no longer used with nouns but survived when the noun was modified by the numeral '2'. Having lost its original dual meaning, the old dual forms may have been extended to neighboring numerals '3' and '4', but devoid of meaning.

the old plural markers. This development was presented in section 4.5 and it lies in connection with the reanalysis in the pronominal system of Germanic languages like Icelandic and Norwegian, as we saw in section 1.1. An almost total loss of the plural markers is evidenced in Ixtenco Otomi,<sup>43</sup> while a partial one is observed in Tilapa Otomi, as the dual and the plural markers were preserved with their original meaning only for the first person inclusive. It is more difficult to envision how this process may have happened, but whatever the process might have been, prior to it, the change must have also involved a semantic change from dual to paucal, like we saw above, and then a later reinterpretation as a general plural.<sup>44</sup>

## 6. Conclusion.

Otomi started to diversify as a linguistic family probably in the beginning of the 18th century from having been a dialectal continuum in the Colonial times of the New Spain. One of the grammatical domains in which the Otomi languages differ most remarkably is in the many ways they exploit pronominal number in both verbs and pronouns, especially in their treatment of dual number. For example, in Northern Otomi, while the dual vanished from the pronouns, it survived in pronominal cross-referencing on the verb in two contexts: (i) circumscribed to a male register where it is a token of male camaraderie, and (ii) within the constructional frame of split conjunction where the old dual has been reanalyzed as a paucal. In contrast, in Southern languages such as Tilapa Otomi and Ixtenco Otomi, the old dual markers have become exponents of a plural value. This is surprising, because typically when dual number is lost as a semantic value, its morphological exponence is also lost.

In general, the distribution and use of the pronominal number systems of the Mesoamerican languages of Mexico and Guatemala to date remain understudied. Dual is not a very common number value in the languages of the area, although it is well attested in the Oto-Pamean languages of Oto-Manguéan (Suárez 1983: 81-82). While Otomi has been known to have dual number for a long time, I hope to have been able to show in this paper that the situation is not that simple when looked at in further detail. This means that stating that a given language has a dual is no longer as informative as one would want that label to be. One does need to state what type of dual it is. In Mesoamerica, just like in Oto-Pamean, dual has also been reported in other languages where it occurs sporadically, such as in Huave (Stairs and de Stairs, 1983) and in Lachixío Zapotec (Persons *et al.*, 2009), a Zapotecan language of the Soltecan group whose dual pronoun (only for the first person) appears to be a newly discovered innovation not reported for other Zapotecan languages (see Operstein 2003). As more languages in this complex linguistic area, and other areas of the Americas, get better and more complete descriptions, we will be able to uncover subtleties regarding number systems which may shed more light onto how such systems can evolve and decay.

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<sup>43</sup> See note 38.

<sup>44</sup> In this connection, Corbett (2000: 268) proposes that a change involving paucal to plural was a likely scenario for the number marking of Mokilese, a Micronesian language (Harrison 1976), where the original trial developed into a paucal before becoming a plural.

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TABLES

Phylum	Branch	Group	Subgroup	Language level
<b>Oto-Manguéan</b>	<b>Oto-Pamean</b>	<b>Otomian</b>	Atzinca:	Matlatzinca Ocuiltec
			<b>Otomi-Mazahua:</b>	Mazahua <b>Otomi languages</b>
		Pamean	Chichimec: Pame:	Chichimeco-Jonaz Northern Pame Central Pame Southern Pame <sup>†</sup>
	Chinantecan Popolocan-Zapotecan Amuzgoan-Mixtecan Tlapanecan-Manguéan			

Table 1. The Oto-Pamean languages.

		Number of possessor				
		SG	DU		PL	
SG	1 <sup>st</sup>	kunú	EXCL	kunú-m <sup>p</sup>	EXCL	kun-hú
	INCL		kunú-s	INCL	kunú-n	
	2 <sup>nd</sup>	kínu		kínu-s		kínu-n
	3 <sup>rd</sup>	kinú		kinú-s		kinhú
DU	1 <sup>st</sup>	kunú-s	EXCL	kunú-vó-s	EXCL	kun-hú-n
	INCL		kunú-s-és	INCL	kunú-s-ín	
	2 <sup>nd</sup>	kínu-s		kínu-s-es		kínu-s-in <sup>45</sup>
	3 <sup>rd</sup>	kinú-s		kinú-s-és		kinhú-s
PL	1 <sup>st</sup>	kunú-r	EXCL	kunú-r-úm <sup>p</sup>	EXCL	kunú-r-hú
	INCL		kunú-r-és	INCL	kunú-r-ín	
	2 <sup>nd</sup>	kínu-r		kínu-r-es		kinu-r-in
	3 <sup>rd</sup>	kinú-r		kinú-r-és		kinhú-r

Table 2. Inflection of the noun *kinhú* ‘field’ in Chichimec.

	SG	DU		PL	
1 <sup>st</sup>	i = kág	EXCL	i = kágu = m <sup>p</sup>	EXCL	i = kág = hũ
		INCL	i = kágo = s	INCL	i = kágu = n
2 <sup>nd</sup>	i = xyék <sup>w</sup>		i = xyék’o = s		i = xyék’u = n
3 <sup>rd</sup>	î = no		î = no = s		î = <b>gó</b>

Table 3. Personal pronouns in Chichimec.

	SG	DU		PL	
1 <sup>st</sup>	tu = nú	EXCL	tu = nú = m <sup>p</sup>	EXCL	tu = nú = hũ
		INCL	tu = nú = s	INCL	tu = nú = n
2 <sup>nd</sup>	ki = nú		ki = nú = s		ki = nú = n
3 <sup>rd</sup>	u = nú		u = nú = s		u = <b>nhú</b>

Table 4. Anterior past tense of the verb *nú* ‘see’ in Chichimec.

<sup>45</sup> Angulo (1932) gives the form *kinusin* for this cell, but the high tone is probably a typo, as the second person possessive is systematically low in the second syllable for this class of nouns.

		PL		
		SG	INCL	EXCL
1 <sup>st</sup>	nú = gá	nú = <b>khú</b>	nú = <b>khé</b>	
	nú = gí	nú = gí = <b>khú</b> nú = gí = <b>hú</b>	nú = gí = <b>khé</b> nú = gí = <b>hé</b>	
2 <sup>nd</sup>	nú = 'í	nú = 'í = <b>hú</b>		
	nú = 'í = gé			
	nú = gé			

Table 5. Personal pronouns in SIT Otomi (Northern Otomi)

		SG	DU	PL
1 <sup>st</sup>	tānāxohnābāte	EXCL	tānāxohnābāte <b>be</b>	EXCL tānāxohnābāte <b>he</b>
		INCL	tānāxohnābāte <b>wi</b>	INCL tānāxohnābāte <b>hø</b>
2 <sup>nd</sup>	cānāxohnābāte	cānāxohnābāte <b>wi</b>		cānāxohnābāte <b>hø</b>
3 <sup>rd</sup>	nāxohnābāte	nāxohnābāte( <b>wi</b> )		nāxohnābāte( <b>hø</b> )

Table 6. Present indicative of the verb *xohnābate* 'teach' in Old Otomi

		SG	DU	PL		
1 <sup>st</sup>	<i>nūguĩ</i>	nú = gí	EXCL <i>nūgābe</i>	nú = ga = 'bé	EXCL <i>nūgāhe</i>	nú = ga = <b>hé</b>
	<i>nūcāgo</i>	nú = ɣa = gá	INCL <i>nūgāwi</i>	nú = ga = <b>wí</b>	INCL <i>nūgāhø</i>	nú = ga = <b>hú</b>
2 <sup>nd</sup>	<i>nūkĩ</i>	nú = k'í	<i>nūkāvi</i>	nú = k'a = <b>wí</b>	<i>nūkāhø</i>	nú = k'a = <b>hú</b>
	<i>nūcāgue</i>	nú = ɣa = gé				
3 <sup>rd</sup>	<i>nūnæ</i>	nú = <b>nū</b>			<i>nūyæ</i>	nú = <b>yú</b>

Table 7. Personal pronouns in Old Otomi.

		SG	DU	PL		
1 <sup>st</sup>	<i>nugó</i>	nu = gó	EXCL <i>nugó-be</i>	nu = gó = 'bé	EXCL <i>nugó-he</i>	nu = gó = 'bé
			INCL <i>nugó-wi</i>	nu = gó = <b>wí</b>	INCL <i>nugó-hí</i>	nu = gó = <b>hí</b>
2 <sup>nd</sup>	<i>nukʔgé</i>	nu = k'í = ge	<i>nukʔgé-wi</i>	nu = k'í = ge = <b>wí</b>	<i>nukʔgé-hí</i>	nu = k'í = ge = <b>hí</b>
3 <sup>rd</sup>	<i>gégé</i>	gégé	<i>nugégé-wi</i>	nu = gégé = <b>wí</b>	<i>nugégé-hí</i>	nu = gégé = <b>hí</b>

Table 8. Personal pronouns in Toluca Otomi (Western Otomi).

		SG	DU	PL		
1 <sup>st</sup>	NEUTRAL	nú = gí	EXCL NEUTRAL	nú = g = 'bé	EXCL NEUTRAL	nú = k = <b>hé</b>
	EMPH.	nú = gá	EMPH.	nú = ga = 'bé	EMPH.	nú = ga = <b>hé</b>
			INCL NEUTRAL	nú = g = <b>wí</b>	INCL NEUTRAL	nú = k = <b>hú</b>
2 <sup>nd</sup>	FORMAL	nú = 'é	FORMAL	nú = 'e = <b>wí</b>	FORMAL	nú = 'e = <b>hú</b>
	INTIMATE	nú = 'í	INTIMATE	nú = 'a = <b>wí</b>	INTIMATE	nú = 'a = <b>hú</b>
3 <sup>rd</sup>		nú = 'ä	nú = 'u			

Table 9. Personal pronouns of Huehuetla Otomi (Eastern Otomi).

	SG	DU	PL
1 <sup>st</sup>	dí = 'yo	EXCL dí = 'yo = <b>'bé</b>	EXCL dí = 'yo = <b>hé</b>
		INCL dí = 'yo = <b>wí</b>	INCL dí = 'yo = <b>hú</b>
2 <sup>nd</sup>	gí = 'yo	gí = 'yo = <b>wí</b>	gí = 'yo = <b>hú</b>
3 <sup>rd</sup>	i = 'yo		

Table 10. Present realis of the verb 'yo 'walk' in Huehuetla Otomi (Eastern Otomi).

	SG	PL
1 <sup>st</sup>	NEUTRAL nú = gá <sup>46</sup>	EXCL NEUTRAL nú = khé
	nú = gí	nú = gí = hé
	EMPH. nú = gí = gá	EMPH. nú = gí = khé
		INCL NEUTRAL nú = khú
		nú = gí = hú
		EMPH. nú = gí = khú
2 <sup>nd</sup>	NEUTRAL nu = gé	nú = 'í = hú
	nú = 'í	
	EMPH. nú = 'í = gé	
3 <sup>rd</sup>	nǒ = 'ó	nú = 'ú

Table 11. Personal pronouns of SIT Otomi (Northern Otomi).

	SG	PL
1 <sup>st</sup>	dí = 'yo	EXCL dí = 'yo = <b>hé</b>
		INCL dí = 'yo = <b>hú</b>
2 <sup>nd</sup>	gí = 'yo	gí = 'yo = <b>hú</b>
3 <sup>rd</sup>	'yo	

Table 12. Present realis of the verb 'yo 'walk' in SIT Otomi (Northern Otomi).

	SG	PL
1 <sup>st</sup>	dá = mati	EXCL dá = mati = ga = <b>mé</b>
		INCL dá = mati = <b>wí</b>
2 <sup>nd</sup>	gá = mati	gá = mati = <b>wí</b>
3 <sup>rd</sup>	bi = mati	

Table 13. Past of the verb *mati* 'call' in Ixtenco Otomi (a Southern language)

	SG	PL
1 <sup>st</sup>	<i>nugagá</i> nú = ga = gá	EXCL <i>nugagá-mé</i> nú = ga = ga = <b>mé</b>
		INCL <i>nuga-wí</i> nú = ga = <b>wí</b>
2 <sup>nd</sup>	<i>nukʔ</i> nú = k'í	<i>nukʔ-wí</i> nú = k'i = <b>wí</b>
3 <sup>rd</sup>	<i>nuʔá</i> nú = 'á	<i>nuʔ</i> nú = 'ú

Table 14. Personal pronouns in Ixtenco Otomi (a Southern language)

<sup>46</sup> The pairs *nú = gá* and *nú = gí* for the first person singular, *nú = gé* and *nú = 'í* for the second person and *nú = khé/khú* and *nú = gí = hé/hú* for the plural, are in free variation. The only difference between them being in usage, i.e., the first form is much more frequent in use than the second one.

	SG	PL
1 <sup>st</sup>	txá = ñǔ	EXCL txá = ñǔ = <b>'mbé</b>
		INCL txá = ñǔ = <b>hú</b>
2 <sup>nd</sup>	grá = ñǔ	grá = ñǔ = <b>wí</b>
3 <sup>rd</sup>	ra = ñǔ	

Table 15. Past of the verb *ñǔ* 'see' in Tilapa Otomi (a Southern language)

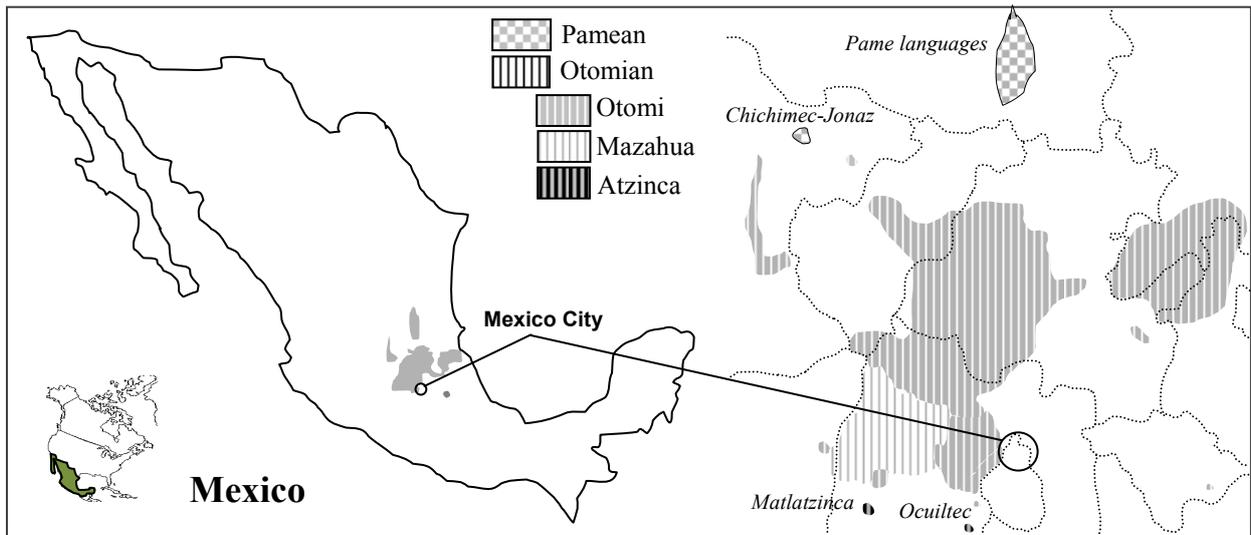
	SG	PL
1 <sup>st</sup>	ñú = gá	EXCL ñú = ga = <b>'mbé</b>
		INCL ñú = ga = <b>hú</b>
2 <sup>nd</sup>	ñú = k'é	ñú = k'e = <b>wí</b>
3 <sup>rd</sup>	ñú = á	ñú = ki

Table 16. Personal pronouns in Tilapa Otomi (a Southern language)

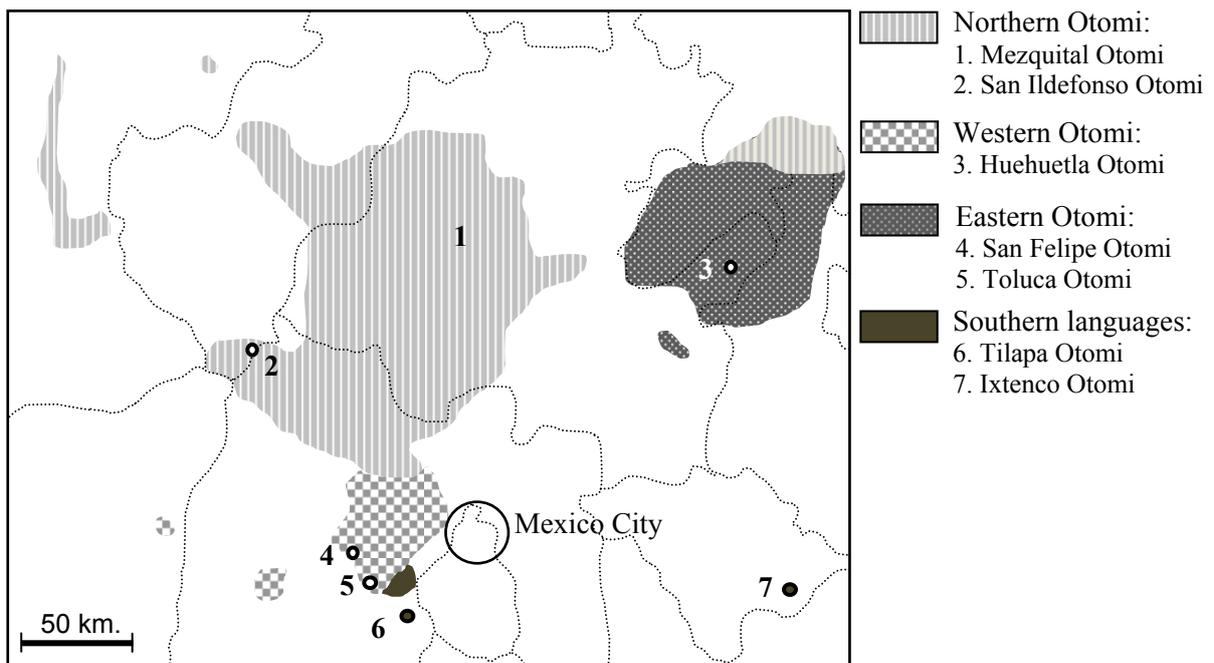
	Old Otomi	West	East	North	South	
Plural	Plural agreement for a subject of 1 <sup>st</sup> & 2 <sup>nd</sup> person	Yes	Yes	Yes	Yes	Yes
	Plural agreement for a subject of 3 <sup>rd</sup> person (only specific humans)	Yes	Yes	No	No	No
	Plural agreement for a subject of 3 <sup>rd</sup> person in the split conjunction construction	Yes	Yes	Yes	Yes (as plural of abundance)	Yes
	Plural pronominal forms	Yes: 1/2/3	Yes: 1/2/3	Yes: 1/2	Yes: 1/2	Yes: 1/2
	Meaning of plural	'more than two'	'more than two'	'more than two'	'more than one'	'more than one'
	Dual	The dual markers now realize plural	No	No	No	No
Dual agreement for a subject of 1 <sup>st</sup> & 2 <sup>nd</sup> person		Yes	Yes	Yes	Yes (only in male speech)	No
Dual agreement for a subject of 3 <sup>rd</sup> person (only specific humans)		Yes	Yes	No	No	No
Dual agreement for a subject of 3 <sup>rd</sup> person in the split conjunction construction		Yes	Yes	Yes	Yes (as paucal)	No
Dual pronominal forms		Yes: 1/2/3	Yes: 1/2/3	Yes: 1/2	No	No
Meaning of dual		'two'	'two'	'two'	'two male friends'	—

Table 17. The number system in the Otomi family.

## MAPS



Map 1. Location of the Oto-Pamean branch of Oto-Manguéan.



Map 2. Location of the Otomi languages and varieties exemplified.