

UNIVERSITY OF CALIFORNIA

Los Angeles

‘Other’ and ‘More’ in San Sebastián del Monte Mixtec and Beyond

A dissertation submitted in partial satisfaction of  
the requirements for the degree Doctor of Philosophy  
in Linguistics

by

Iara Mantenuto

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## ABSTRACT OF THE DISSERTATION

‘Other’ and ‘More’ in San Sebastián del Monte Mixtec and Beyond

by

Iara Mantenuto

Doctor of Philosophy in Linguistics

University of California, Los Angeles, 2020

Professor Pamela Munro, Co-Chair

Professor Carson Schütze, Co-Chair

This dissertation offers a definition of “disanaphor morphemes.” I claim that all disanaphor morphemes are deep anaphors indicating a non-identity relationship between the DP that contains them and their antecedent. I listed three characteristics that the disanaphor DPs have, they select an antecedent from the context, they share a common property with their antecedent and they are distinct from their antecedent.

I argue that disanaphors morphemes are present in different languages and I show how to conceive a single core meaning for elements that present what superficially seem to be two meanings (distinct and distinct kind), and how to pragmatically derive a third meaning (additional). Furthermore, I explore the extent to which a language that displays this apparent homophony also shares the same core meaning identified in *other/else* through an analysis of San Sebastián del Monte Mixtec (SSM).

An important contribution of this dissertation is its focus on a syntactic analysis of *other/altro*, which examines its different word orders within the DP and on how numerals interact with it, two questions that still lack a unified answer (Cinque 2016, Lechner 2010, Thomas 2011). I claim that disanaphor morphemes are located in two positions, one below the numeral projection but above the adjectival projection, and one above the numeral projection but below determiners and Q-adjectives. I demonstrate that each position in English is associated with a specific reading, depending on what the disanaphor *other* modifies. I also propose that the raising of *other* from its original position to the higher position is obligatory in some languages, as for example in Teramano, Abruzzese Italian and in other varieties of Italian. Moreover, I propose that the additive reading is not part of the meaning of *other* but that it can be triggered by the context, thus making *other* different from *more*. I then claim that the morpheme *ga* in SSM is a disanaphor morpheme when occurring DP-internally, and I demonstrate that the characteristics and distribution I proposed for disanaphors in Italian and English still holds for *ga*.

The secondary goal of this dissertation is to explain the occurrence of *ga* VP-internally, when it does not function as a disanaphor morpheme. VP-internally, *ga* can function as an additive morpheme or as a comparative morpheme, similar to English *more*. I offer a detailed description of the three comparative constructions in SSM: particle comparatives, locative comparatives and conjoined comparatives. I set this description within the typological claims made by Stassen (1985) and the more recent theoretical literature on comparatives; in so doing, I offered the argument that conjoined comparatives can co-occur with gradable predicates and that we need to expand both our typology as well as our analysis. I focused specifically on conjoined comparatives in SSM and I offered a possible analysis.

Finally, this dissertation offers a wider description of the grammar of SSM. This includes the language's phonology, word order, interrogatives, negation, adverbs, classifiers, aspects, and relative clauses among other topics in an overview of the linguistic features of the language. In particular I focused on those aspects of the language that are relevant for the determiner phrase and comparative constructions.

The dissertation of Iara Mantenuto is approved.

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2020

*To all the first generation students out there*

Never doubt that you belong.

Believe in yourself.

Your ideas are great and we want to hear them.

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## List of Abbreviations:

1, 2, 3	1 <sup>st</sup> , 2 <sup>nd</sup> , 3 <sup>rd</sup> person
CONT	Continuative aspect
COMP	Completive aspect
POT	Potential aspect
HUM	Human
SG	Singular
PL	Plural
M	Masculine
F	Feminine
NEG	Negation
REAL	Realis
IRR	Irrealis
PHRASAL	Phrasal (negation)
N	Nominal (negation)
HON	Honorific
INC	Inclusive
EXC	Exclusive
POSS	Possessive
BASE	Pronominal base
IND	Independent pronoun
CFR	Classifier
GA	<i>Ga</i> morpheme
Q	Question particle
OBJ	Object
INF	Infinite
NE	Italian <i>ne</i> particle
CI	Italian <i>ci</i> particle

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If you know me, you know that one of my favorite things to do is to read the acknowledgment sections in a dissertation. It is probably because it takes a village to go through a Ph.D. program and I like to see the joy and gratefulness transpire from the pages. So, this is my turn now, and I hope to not forget anyone, because I have so many people to thank I do not even know where to start.

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## Chapter 1

### Introduction

#### 1.1. Overview of the dissertation

The purpose of this dissertation is three-fold. 1) Its theoretical contribution is a syntactic analysis of *other/altro*, which focuses on its different word orders within the DP and on how numerals interact with it, two questions that have not found a unified answer (Cinque 2016, Thomas 2011, Lechner 2010). 2) Many languages use the same morpheme to express two seemingly distinct meanings, distinct and different; I show how to conceive of these in terms of a single core meaning and how to pragmatically derive a third meaning, additional. We can then see to what extent a language that displays this apparent homophony shares the same core meaning which I have identified in *other/else*. Thus, the typological contribution of this dissertation is to offer a unified definition of *other* that will allow crosslinguistic comparison, beyond Indo-European languages (adding to work done by Saxon 1984) 3) Finally, its documentary contribution is to offer a better understanding of the determiner phrase in San Sebastián del Monte Mixtec (SSM), with a focus on the clitic *ga*, which corresponds to ‘other’ but has additional uses including comparatives. This dissertation offers the first documentation of the basic grammatical features of SSM.

The dissertation defines the class of morphemes to which English *else/other* and Italian *altro* belong, and extends and applies this class outside of Indo-European languages, thanks to the presence of the morpheme *ga* in SSM, which shares the same properties as *other/else* and *altro*. I call these elements “disanaphor morphemes,” in contrast to the many names that these elements have acquired throughout the current literature that lack a unified definition across languages (e.g. other-items, else-items, altro-items, exceptive particles, additive particles, alternative particles; sometimes with misleading implications). These morphemes have a shared definable set of

characteristics, which I will present in chapter 2 for English and Italian and then again in chapter 4 for Mixtec. I propose that this group of morphemes is typologically robust and present in non-Indo-European languages, thus adding to the currently available typology (Mikkelsen & Hardt 2019 for Danish; Cinque 2016 for Italian; Oikonomou 2015 and Lechner 2010 for Greek; Charnavel 2015 and Tovená & Van Peteghem 2002 for French; Harris 2014, Barros 2011, Thomas 2011, Kamp 2011, Kubota & Uegaki 2009, Isac & Reiss 2004, Culicover & Jackendoff 1995 and Heim et al. 1991 for English; Umbach 2009, Beck 2000 for German).

Additionally, I claim that typologically there are similarities beyond the meaning level: these morphemes present similar syntactic properties as well, such as the location where the morphemes are generated within the DP and the DP-internal movement which is obligatory in some languages but optional in others. Thus, I offer a syntactic analysis, as the semantics alone is not able to account for the movements that these morphemes undergo (also in chapters 2 and 4).

Finally, in chapter 5 I conclude the dissertation with an open typological question: I show that the morpheme *ga* in Mixtec, when occurs VP-internally, is used as an additive morpheme as well as a comparative morpheme, something that is not a novelty, as typologically it is known that morphemes having a role in additivity, such as *more*, are often used in comparatives (see also Thomas 2018). I use chapter 5 to provide in-depth documentation of comparatives in San Sebastián del Monte Mixtec, including a first analysis of its conjoined comparatives.

## 1.2. What this dissertation is not about

The main focus of this dissertation is not formal semantics, but rather syntax. I have included enough semantics to account for the meanings involved in disanaphor morphemes and comparatives. The majority of the work up to now has focused on the semantic properties of *other*, and as a consequence many syntactic properties of *other* have been not accounted for.

In section 1.2.1 I offer some observations on the syntactic distribution of *else* and *other*, but I was not able to include in this dissertation a unified proposal for *other* and *else*. *Else* seems to share the meaning of *other*, but with a distinct syntactic distribution. Luckily, a lot of work has been done on *else*, thus leaving it as the perfect starting point for future research.

Finally, there are many additional uses of *other* and *altro* that should be integrated in a comprehensive account that I will not cover; I list them in section 1.2.2. All these occurrences have two things in common: they are present crosslinguistically in languages unrelated to English but which use what I claim is a disanaphor morpheme, and with one exception (*each other/one another*) they have not been related to the theories available for *other* or *else*.

### 1.2.1. *Else*

In English the words for *else* and for *other* are distinct, unlike Italian where the same word is used (respectively *altro*). In English the reason why we have two different words, each with a specific syntactic distribution (Barros 2011), is due to the history of the language: *other* and *else* seem to be historical allomorphs. They are derived from the same Proto-Indo-European root *\*al-*; such a root has in some cases combined with the adjectival comparative *\*-tero-*, as in the case of English *other* and Italian *altro*, while in other cases it has not combined, as in the case of English *else* (Oikonomou 2015). Today *else* and *other* are in syntactic complementary distribution.

*Else* can only occur with a pronominal quantificational expression or with a wh-word which is not a modifier.

- (1)
- a. Someone else hugged Marco.
  - b. Everyone else hugged Marco.
  - c. No one else hugged Marco.
  - d. Did anyone else hug Marco?
  - e. Who else hugged Marco?

*Else* can never appear in quantificational expressions formed by a quantifier and a noun or with a wh-word which is a modifier.

- (2)
- a. \*Some <else> girl <else> hugged Marco.
  - b. \*Every <else> girl <else> hugged Marco.
  - c. \*No <else> girl <else> hugged Marco.
  - d. \*Did any <else> girl <else> hug Marco?
  - e. \*Which <else> girl <else> hugged Marco?

The opposite is true for English *other*. *Other* can never occur with a pronominal quantificational expression or with a wh-word not functioning as a modifier (3), while it can always occur in a quantificational expression formed by a quantifier and a noun or with a wh-word which is a modifier (4).

- (3)
- a. \*Someone other hugged Marco.
  - b. \*Everyone other hugged Marco.
  - c. \*No one other hugged Marco.
  - d. \*Did anyone other hug Marco?
  - e. \*Who other hugged Marco?
- (4)
- a. Some other girl hugged Marco.
  - b. Every other girl hugged Marco.
  - c. No other girl hugged Marco.
  - d. Did any other girl hug Marco?
  - e. Which/What other girl hugged Marco?

It seems therefore that *else* can postmodify a complex word or a wh-word while *other* can only premodify the projection of a noun phrase. In other words, *other* but not *else* can be followed by a noun.

In Italian we have *altro* in both environments and with the same meaning; therefore, we can assume that *altro* in Italian can be both a postmodifier of a complex word and of a quantifier (5) and the premodifier of the projection of a noun phrase (6).

- (5)
- a. Qualcun altro ha abbracciato Marco.  
 some.SG.M other.SG.M have.3SG hugged Marco  
 ‘Someone else hugged Marco.’
- b. Tutti gli altri hanno abbracciato  
 all.PL.M the.PL.M other.PL.M have.3PL hugged  
 Marco.  
 Marco  
 ‘Everyone else hugged Marco.’
- c. Nessun altro ha abbracciato Marco.  
 no.SG.M other.SG.M have.3SG hugged Marco  
 ‘No one else hugged Marco.’
- d. Qualcun altro ha abbracciato Marco?  
 some.SG.M other.SG.M have.3SG hugged Marco  
 ‘Did anyone else hug Marco?’
- e. Chi altro ha abbracciato Marco.  
 who other.SG.M have.3SG hugged Marco  
 ‘Who else hugged Marco?’

- (6) a. Qualche altra ragazza ha abbracciato  
some other.SG.F girl.SG.F have.3SG hugged  
Marco.  
Marco  
‘Some other girl hugged Marco.’
- b. Tutte le altre ragazze hanno  
all.PL.F the.PL.F other.PL.F girl.PL.F have.3PL  
abbracciato Marco.  
hugged Marco  
‘Every other girl hugged Marco.’
- c. Nessun’-altra ragazza ha abbracciato Marco.  
no.SG.F-other.SG.F girl.SG.F have.3SG hugged Marco  
‘No other girl hugged Marco.’
- d. Qualche altra ragazza ha abbracciato  
some other.SG.F girl.SG.F have.3SG hugged  
Marco?  
Marco  
‘Did any other girl hug Marco?’
- e. Quale/Che altra ragazza ha abbracciato  
which/what other.SG.F girl.SG.F have.3SG hugged  
Marco.  
Marco  
‘Which/What other girl hugged Marco?’

We can conclude that the case of English *else* versus *other* is due to the fact that they are historical allomorphs, the distribution of which is contrastive. However, there are some limitations to the complementary distributional nature of *else/other* and their comparison to *altro*. While *else* and *other* are still in complementary distribution with wh-adjuncts (7)-(8), *altro* can never be used with wh-adjuncts (9).

- (7) a. How else would you make tiramisu?  
 b. When else would you make tiramisu?  
 c. Where else would you make tiramisu?  
 d. Why else would you make tiramisu?
- (8) a. \* How other would you make tiramisu?  
 b. \* When other would you make tiramisu?  
 c. \* Where other would you make tiramisu?  
 d. \* Why other would you make tiramisu?
- (9) a. \* Come        altro        faresti        il        tiramisu?  
       how        other.SG.M    would.do     the.SG.M    tiramisu.SG.M
- b. \* Quando    altro        faresti        il        tiramisu?  
       when       other.SG.M    would.do     the.SG.M    tiramisu.SG.M
- c. \* Dove        altro        faresti        il        tiramisu?  
       where       other.SG.M    would.do     the.SG.M    tiramisu.SG.M
- d. \* Perchè    altro        faresti        il        tiramisu?  
       why        other.SG.M    would.do     the.SG.M    tiramisu.SG.M

Italian *altro* seems to require a noun complement when we deal with adjunct wh-words, while *else* does not. I hope to further explore this distinct distribution in future work.

Huddleston & Pullum (2002) have also described *else* as being equivalent to *other*, but with one structural difference; while *else* optionally takes a complement headed by either *than* or *but*, *other* can optionally take *than* and never *but*.

- (10) a. Anyone else than Lisa went to the gym.  
       b. Anyone else but Lisa went to the gym.
- (11) a. I looked for Rita anywhere else than the library.  
       b. I looked for Rita anywhere else but the library.

- (12) a. Anyone other than Lisa went to the gym.  
 b. \* Anyone other but Lisa went to the gym.
- (13) a. I looked for Rita anywhere other than the library.  
 b. \* I looked for Rita anywhere other but the library.

Finally, another set of contrastive behavior of *other/else* involves prepositions (Schütze p.c.).

- (14) a. With no one else would she feel safe.  
 b. With no other person would she feel safe.
- (15) a. (\*At/\*in) no place else would she feel safe.  
 b. \*(In/At) no other place would she feel safe.

In this dissertation I was not able to account for this data but I hope to do so in the future.

### 1.2.2. Occurrences of *other* and *altro* not accounted for

These are some constructions which are present crosslinguistically and that have not been accounted for in the literature.

- (16) I go to work every other day.
- (17) I will go to school another day.

The meaning associated with 0 is one which involves alternate days, the meaning in (17) is a distinct day from the one in the context.

A different meaning associated with *other* is reported in the minimal pair in (18) and (19), where the two sentences clearly have different meanings (Munro p.c.).

- (18) John read some book or other.
- (19) John read some other book.

More specifically, as pointed out by Schütze (p.c.), it seems that (18) shares some similarities with *whatever/whichever* free relatives and possibly might not function as a disanaphor morpheme, though further investigation is needed, while (17) differs only subtly from *John read another book* (in the nonadditive ‘distinct’ sense).

Another unanswered question to be explored in future work surrounds the impossibility of interchanging *other* and *another* when they co-occur with *one* and with *some* (Schütze p.c.).

(20) one way or \*(an)other

(21) some way/how or (\*an)other

It seems relevant to see which forms of *other* are idiomatic and which ones are still productive.

A slightly more investigated construction is the one involving *other* and reciprocals. Huddleston and Pullum (2002), who write about *each other* and *one another*, claim that these two constructions do not have any semantic difference, yet syntactically we can observe that they are distinct.

(22) Sozen and Sorin hugged one another.

(23) Sozen and Sorin hugged each other.

Similarly in Italian we have the construction of *l’un l’altro*, which is equivalent to ‘one another’ and to ‘each other’, yet it uses the definite determiner.

(24) Sozen e Sorin si sono abbracciati l’un  
 Sozen and Sorin REC.3SG be.3PL hugged the.SG.M-one  
 l’altro.  
 the.SG.M-altro.SG.M  
 ‘Sozen and Sorin hugged one another/each other.’



- (26) I                    miei                    amici                    si                    parlano  
 the.PL.M            my.PL.M            friend.PL.M            REC.3PL            talk.3PL  
 ‘My friends talk to each other.’

In English, a parallel construction to the clitic form of the reciprocal does not exist; therefore, only the equivalent of 0 is available (0-(28)).

- (27) My friends spoke about each other for three days.                    (Belletti, 1982: 113)

- (28) \* John spoke about each other.

In English, as 0 and (28) show, the reciprocal expression is an anaphor whose antecedent has to be a plural NP. The same is true in the Italian clitic reciprocal case. Belletti extends such a theory by observing that similar behavior as in (27) and (28) is also available in Italian ((29)-(30)).

- (29) I                    miei                    amici                    hanno                    parlato  
 the.PL.M            my.PL.M            friend.PL.M            have.3PL            talked  
 [l’-uno                    [dell’-altro]]                    per    tre    giorni  
 the.SG.M-one.SG.M    of.the.SG.M-other.SG.Mfor    three    days  
 ‘My friends have talked one about the other one for three days.’  
 Italian (Belletti, 1982: 113)

- (30) \*Mario            ha                    parlato [l’-uno                    [dell’-altro]]  
 Mario            have.3SG            talked the.SG.M-one.SG.M            of.the.SG.M-other.SG.M  
 ‘Mario has spoken one about the other.’                    Italian (Belletti, 1982: 113)

Belletti (1982) describes *l’uno...l’altro* as a reciprocal discontinuous anaphor, which as such is subject to binding principle A. *L’uno* is bound locally by an antecedent in an A-bar position;

*l'altro*<sup>3</sup> is located in an A-bar position but is bound by *l'uno*. In the future I hope to revisit Belletti's analysis to see how it extends crosslinguistically and how my proposal about the syntax of *altro* intersects with Belletti's proposal.

An additional use of *other* is in the construction *other than* (Huddleston & Pullum 2012: 1145).

(31) I was talking with any other woman than Mary.

As 0 shows, Italian does not have the same use of predicative *other* as English does in 0.

(32) Voglio parlare con qualsiasi donna  
 want.1SG talk.INF with any woman.SG.F  
 all'-infuori di Maria.  
 at.the.SG.M-outside of Maria  
 'I want to talk with any woman other than Maria.'

Italian offers a use of 'other' that recalls the English *other than* construction, but which has a different meaning 0. While in English *other than* means any woman but not Mary, in Italian *altro che* has also an exclusive meaning, but at the same time it adds a preference towards something, in the way that a discourse emphatic particle would. In (33) the meaning is that the amusement park is not the biggest show after the Bing Bang (this is the common meaning of exclusion that

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<sup>3</sup> Longobardi (p.c.) disagrees with the idea that *other* is an anaphor, and Belletti (1982) herself in a footnote (p. 129 footnote 7) thinks that *other* is not intrinsically an anaphor but becomes one only in a reciprocal construction.

- (i) Q: Hai visto quello studente?  
 have.2SG seen that.SG.M student.SG.M  
 'Have you seen that student?'  
 A: No, ho visto l'-altro.  
 no have.1SG seen the.SG.M-other.SG.M  
 'No, I have seen the other one.' Italian (Belletti, 1982: 129)
- (ii) Confondo l'-uno con l'-altro.  
 confuse.1SG the.SG.M-one.SG.M with the.SG.M-other.SG.M  
 'I confused one with the other one.' Italian (Belletti, 1982: 129)

*other than* presents in English), but it also adds a preference of the speaker and an emphasis that is missing in its English counterpart. The best translation would be not “another than” but “far from.”

- (33) Altro che luna park...il piu' grande  
 other.SG.M than amusement park the.SG.M more big  
 spettacolo dopo il big bang siamo noi.  
 show.SG.M after the.SG.M big bang be.1PL we  
 ‘The biggest show after the Big Bang is us, not the amusement park.’  
 Literally: ‘Other than the amusement park .... the biggest show after the Big Bang  
 is us.’ (Jovanotti 2011 [1:00-1:23])

However, if *altro che* co-occurs with a negation, then the same meaning as English *other than* arises.

- (34) Non posso fare altro che mangiare.  
 not can.1SG do.INF other.SG.M than eat.INF  
 ‘I cannot do anything other than eating.’

- (35) I cannot do anything other than eating.

I was unable to find anything more on the *other than* and *altro che* constructions, nevertheless I look forward to including them in the future in my analysis.

### 1.3. Methodology

Almost all the data used in this dissertation comes from my fieldwork with native speakers of English, Italian, San Sebastián del Monte Mixtec, and in a couple of occasions also of Teramano and Abruzzese Italian. The reasoning behind the choice of these languages is to do a typological work on languages I have a stronger understanding of, one of which has the most literature on the topic of *other* (English), one which is related to it but which I am a native speaker of (Italian), and one that I have advanced understanding of (San Sebastián del Monte Mixtec). I chose this approach because I believe in typological work which is in-depth (Bochnak 2013) and not middle ground (Baker & McCloskey 2007). “Middle ground” requires that a linguistic phenomenon be analyzed

in a limited (hence medium) number of languages, generally twelve or so, to a medium level of depth.

The majority of this dissertation is dedicated to San Sebastián del Monte Mixtec, which is almost completely undescribed. Most of the data was collected with the help of Mr. Félix Cortés and Mr. Adrian Davila Espinoza, but many of the data were checked with multiple people in the town of San Sebastien del Monte, in Oaxaca, Mexico.

The data are the result of two kinds of elicitation techniques, translation and judgement. In the case of the translations I have asked the people I have consulted with to translate a sentence from Spanish to Mixtec and vice-versa. In many cases I would have visual aids of images to describe or to help me with the context, in others I have offered contexts that were descriptive. The following two steps involved manipulation of the sentences obtained to create paradigms as complete as possible, and the systematic checking of negative counterexamples. Finally, for the semantics investigation, I have checked the judgement of the truth conditions of some of the sentences, based on contexts I have offered to the language consultants, both in visual and oral format.

In the future I hope to be able to confirm the validity of my claims in recordings of free speech as well as of narratives; however, for now I follow Bochnak's (2013) and Matthewson's (2004) claims on the validity of the methodology used, and I refer the reader to Matthewson (2004) for a description of the shortcomings of these methodologies.

#### **1.4. My work with the community**

I am a strong believer that even when we do theoretically driven linguistic work we cannot avoid documentation based on fieldwork. For how much we are limited by time as academics, whether we are graduate students or professors, we have a moral obligation to create materials

and/or offer resources to empower the linguistic work that the community helping us wants to achieve. I will not go in detail about this discussion on balancing linguistic and community work, rather I am going to suggest the following readings on this topic (Yamada 2007; Czaykowska-Higgins 2009; Glenn 2009; Leonard and Haynes 2010; Grinevald and Sinha 2016; Leonard 2018; Sapién 2018; among others).

I am very grateful to the people I have been collaborating with, both in the town of San Sebastián del Monte and in the town of Yucuquimi de Ocampo. Thanks in particular to Félix Cortés and to Octavio León Vázquez, I have been able to be involved in projects with the youth in their towns in the state of Oaxaca.

Additionally, Octavio and I presented at the Language Documentation and Conservation conference in 2019 about how to teach and learn tones. We have unified our theoretical knowledge of linguistics with our applied linguistics background, and we have offered a series of techniques to use for learning and teaching tones, for different kinds of learners. We applied these techniques in two workshops we taught to young members of the communities of Yucuquimi de Ocampo and of San Sebastián del Monte.

During summer 2019, Octavio and I have co-taught a one week course for teenagers in the town of Yucuquimi de Ocampo (León Vázquez & Mantenuto 2019a). We had the support of the Agencia Municipal, of the Bachillerado and of the Preparatoria (both high schools). The course covered classes and conversations on Mixtec identity, Mixtec history, history of Otomanguean languages, an introduction to professional outcomes that bilingualism in Mixtec and Spanish (and possibly English) would offer them, an introduction to linguistics, a workshop on how to move forward with projects led by the teens to revitalize the language, and daily classes on tone

recognition and writing based on the work that Octavio and I have done (León Vázquez & Mantenuto 2019b).

In December 2019, Octavio and I, with the help of Mr. Félix Cortés, proposed a similar course to the one done in the summer in the town on San Sebastián del Monte. There we had the support of the Telesecundaria (junior high school) and of the social group Club Alma Mixteca (the club formed by the members of the diaspora community in California and of the community members in San Sebastián del Monte). As a consequence of this work some students got together to share with the town the importance of preserving the language, and they have created signs to put around the town in Mixtec, as a statement that these young teens want the language to continue to be used. From the interest of the young members of the communities in maintaining the language and learning more about their culture, we have obtained a grant (Foundation for Endangered Languages Grant) to continue the work led by the teens. The purpose of this project is to involve the young members of the community in taking on an active role in revitalizing their language. The middle school and high school students will create materials in Mixtec for the towns to boost the interest of the community in preserving their language and teaching it to the younger generations. For example, they will create signs for the clinic with body parts and helpful information to aid elder members of the community in communicating with the clinic staff. They will create signs that will be around town to encourage people to communicate in Mixtec, and to preserve knowledge of the more traditional plants of the region and their traditional names. Finally, they will create games to share with other students which will be kept in the new youth centre that has opened in the town.

Finally, outside of my research and my community work I have started exploring teaching linguistics in pre-university settings, such as in elementary and middle school classrooms. I have

presented at Manuel González Gatica School in Huajuapán de León thanks to the interest of the teachers in the school lead by Judith Cortés Sánchez, and I was invited to the Oakwood School in Los Angeles by Maxim Dukan, a social studies teacher. In both cases, the main focus was indigenous languages of Mexico, with an emphasis on the ones spoken in Oaxaca. Four main topics were at the center of each class: bilingualism, language and identity, basic theoretical linguistics and immigration. My experience confirmed the importance of outreaching to schools and of talking about linguistics in general, but also documentation and revitalization in particular, as the students were all receptive to this information.

These were a few projects I am thankful to have had the opportunity to be involved in, and that made the writing of this dissertation a lot more pleasant, while learning about the grammar of San Sebastián del Monte Mixtec, and most recently also about Yucuquimi de Ocampo Mixtec.

### **1.5. Outline of the dissertation**

The rest of this dissertation is organized as follows. In chapter 2 I describe the syntax, semantics and pragmatics of ‘other’ in English and in Italian. I call these elements “disanaphor morphemes” and I claim that all disanaphor morphemes are deep anaphors presenting a non-identity relationship between the DP that contains them and their antecedent. The theoretical contribution of this chapter lies in explaining the two different positions that *other* has in the DP and to offer a unified account for its meanings.

In chapter 3 I present a brief description of San Sebastián del Monte Mixtec in order to facilitate the presentation of the topics covered in chapters 4 and 5. I report basic information about the Mixtecan language family; I discuss the phonology of the language; I cover the morphology and the syntax of some of the basic constructions, such as possessives, word order, pronouns, interrogatives, adverbs, verb aspects, adjectives, and negative constructions. I conclude the chapter

by focusing on the determiner phrase (DP), which will be particularly relevant for understanding my claim that when *ga* occurs DP internally it is a disanaphor morpheme.

In chapter 4 I offer empirical evidence for the distribution and meaning associated with the *ga* morpheme in San Sebastián del Monte Mixtec. I document when *ga* occurs in both the determiner phrase and in the verb phrase. I argue that *ga* is a disanaphor morpheme DP internally and an additive morpheme VP internally.

In chapter 5 I show that the *ga* morpheme, which I have analyzed as parallel to English *other* is also used in comparatives. This chapter presents a detailed description of comparatives in San Sebastián del Monte Mixtec, describing the existence of three comparative structures and offering an analysis for the conjoined comparative construction.

Chapter 6 concludes by reviewing the content of this dissertation, offering a few crosslinguistical observations and reporting open questions for future research.

## Chapter 2

### Disanaphors

#### 2.1. An introduction to disanaphors

The purpose of this chapter is to describe the syntax, semantics and pragmatics of ‘other’ in English and in Italian. *Other*, *else* and their correspondents in Italian, German, Greek, and French have been grouped together in the linguistic literature because of their encoding of “otherness” (Oikonomou 2015), and their more or less directly shared Indo-European root. I will introduce the term “disanaphor morphemes” for these elements that encode “otherness”. I claim that all disanaphor morphemes modify a NP, and a non-identity relationship holds between the DP that contains them and their antecedent. The name “disanaphor” comes from the shared similarity with deep anaphors (which I will further explain in sections 2.2 and 2.4), plus the prefix “dis-” which refers to the “non-identity relationship” or “disjoint nature” of these DPs. I introduce this core concept in this chapter and I extend it to Mixtec *ga* in chapter 4.

The theoretical contribution of this chapter lies in its syntactic analysis of English *other*, demonstrating that looking at the concept only through semantics is not a comprehensive way to understand the distribution of these disanaphor morphemes, as this approach is not able to explain the two different positions that *other* has in the DP or to offer a unified account for the meanings that it is capable of acquiring. The meanings in question are summarized as distinct kind and distinct token. I claim that whenever *other* precedes the numeral it indicates a distinct token and when it occurs below the numeral it indicates a distinct kind/type. Thus, I will syntactically derive these readings. Moreover, I will demonstrate that the disanaphor morphemes are not additive particles, but that instead additivity is derived from the pragmatics of the context. Finally, this chapter offers a detailed analysis of Italian *altro*, adding to work by Cinque (2016).

This chapter is organized as follows: in §2 I describe the core meaning of *other/else* and of *altro*, in §3 I focus on the syntax of *other*, in §4 I extend my analysis to the syntax-semantics interface of the DP to determine the positions of *other*, and motivate the different meanings associated with it. §5 summarizes and discusses open questions.

## 2.2. The core meaning of *other/else/altro*

In this section, I am going to define the core meaning of referentially dependent elements that go beyond pronouns and anaphors, namely items like English *other* and *else* and Italian *altro*. I am going to assume that they are equivalent in their core meaning, but they are distinct in their syntactic restrictions, as I show in section 2.4 on *other* and *altro*.

*Other* and *else* are anaphoric morphemes, which establish a non-identity relation between the DP that contains *other* or *else* and its “antecedent” (Heim et. al. 1991, Culicover & Jackendoff 1995, Lechner 2010, Kamp 2011, Thomas 2011, Barros 2011, Oikonomou 2015). Note that the antecedent does not have to be overt in the discourse, but it can be included in the context of the utterance. Based on this preliminary definition, the meaning of (36)a is given in (36)b.

- (36) Context: Gina is a student in Charlie’s political science class, where she was assigned to read *Das Kapital*.
- a. Gina read some other book.
  - b. There is a book x that is distinct from the salient book in the context, *Das Kapital*, and Gina read x.

The same is also true for *else*, as we can see in example (37), which is parallel to (36).

- (37) Context: Gina is a student in Charlie’s political science class, where she was assigned to read *Das Kapital*.
- a. Gina read something else.
  - b. There is some x (possibly a book) that is distinct from the salient book in the context, *Das Kapital*, and Gina read x.

Italian *altro* works in exactly the same way as *other* and *else*.

- (38) Context: Gina is a student in Charlie’s political science class, where she was assigned to read *Das Kapital*.
- a. Gina ha letto qualche altro libro.  
 Gina have.3SG read some other.SG.M book.SG.M  
 ‘Gina read some other book.’
- b. There is a book x that is distinct from the salient book in the context, *Das Kapital*, and Gina read x.
- (39) Context: Gina is a student in Charlie’s political science class, where she was assigned to read *Das Kapital*.
- a. Gina ha letto qualcos’-altro.  
 Gina have.3SG read something-other.SG.M  
 ‘Gina read something else.’
- b. There is some x (possibly a book) that is distinct from the salient book in the context, *Das Kapital*, and Gina read x.

Expanding on Barros’ (2011) proposal for *else*, I claim that DP containing elements like *other* and *else* are similar to deep anaphors (Hankamer & Sag 1976): they must have an “antecedent” either overtly or in the context to be felicitous. However, they crucially differ in that “antecedent” has the opposite of its usual meaning, as Binding Theory and variable binding are not involved (Isac & Reiss 2004, contrary to Saxon 1984<sup>4</sup>) and coindexation is prohibited. In examples (36) and (37) the antecedent was in the context, while in (40) and (41) the antecedent is overt (and underlined in each sentence).

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<sup>4</sup>Saxon (1984) proposes that the third person pronoun *ye* in Dogrib (Athabaskan) requires a c-commanding NP within a local domain. Thus, *ye* behaves like a reflexive pronoun; however, differently from a reflexive pronoun it needs to be disjoint in reference from the c-commanding NP within the local domain.

- (i) a. John ye-hk’è ha.  
 John he-shoot FUT  
 ‘John<sub>i</sub> is going to shoot him<sub>j</sub>.’
- b. \*ye-zha shèet.  
 he-son ate  
 Intended: ‘His son has eaten.’

Saxon (1984: 241-243)

(40) Gina was supposed to read the book *Das Kapital* but she read some other book.

(41) Gina was supposed to read the book *Das Kapital* but she read something else.

A deep anaphor is a pronominal element which receives its interpretation from rules of semantic interpretation referring to an object in the context of utterance (Hankamer & Sag 1976).

(42) John ate a pizza with grasshoppers, but Marco couldn't do it.

In (42) *it* is the deep anaphor. Deep anaphors contrast with surface anaphors because the latter have a fully articulated syntactic structure which is not visible because of phonological deletion (Hankamer & Sag 1976).

(43) Maria writes parts of her dissertation every day but Jane doesn't [~~write parts of her dissertation every day~~].

In (43), a case of Verb Phrase Ellipsis (VPE), the verb phrase is entirely non-pronounced.

*Other* and *else* modify a NP, and the containing DP (the DP containing *other/else*) uses the antecedent in determining its own reference, either overt or non-overt in the discourse, but present in the common ground of the speakers.<sup>5</sup> I use “modify” in the way that Barros (2011) and Oikonomou (2015) use it, such that *other* and *else* add additional information to the NP that they modify.

(44) Context: In the classroom the professor asks a question. John raises his hand to answer.  
Professor: Does anyone else want to answer? / Does any other student want to answer?

In sentence (44) the professor in his questions is asking for a distinct student from the antecedent, *anyone else* and *any other student*, namely John, within the set of possible people in the class to

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<sup>5</sup> A postcedent is an antecedent that actually follows the element it refers to, as in a backward pronominalization processes.

whom the question was asked. Since we are dealing with a deep anaphor, the DP containing *other/else* needs to have an antecedent or a postcedent. Thus, as previously stated by Kamp (2001), *other/else* introduce an existential presupposition, which states that there is some contextually salient entity, whose referent is disjoint from the referent of the DP containing *other/else*.

(45) John ate a/one cookie and Mary ate the other ?(one/cookie).<sup>6</sup>

(46) John ate a cookie and Mary ate \*(something) else.

A core requirement that comes along with the existential presupposition is a distinctness (also known as “non-overlapping” in Thomas (2011)) reading between the DP containing *other/else* and its antecedent. The two elements in question cannot co-refer and thus they cannot share the same identity (Oikonomou 2015).

(47) Octavio gave a talk on Mixtec today and he will give a talk on another morphosyntactic topic tomorrow.

In (47) it is obvious that the two talks, although both morphosyntactic talks, are on distinct topics. I am going to state that *other* and *else* are different from deep anaphors, they are “disanaphor morphemes” and the DP that contains them is a “disanaphor.” In (48) I propose a definition for disanaphors.

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<sup>6</sup> (45) is not grammatical with *a* for everyone, hence my use of a question mark before the parenthesis. For the people who do not find (45) acceptable, the two options offered (*a* and *one*) are not equivalent. If we have *one* in the antecedent DP the noun can be omitted in the DP containing *other*, otherwise it cannot.

(i) John ate one cookie and Mary ate the other (one/cookie).

(ii) John ate a cookie and Mary ate the other \*(one/cookie).

Further work would be necessary to explore this restriction.

- (48) Disanaphor: a deep anaphor which shares some feature with its antecedent but which must not coincide with it (distinctness requirement).

In other words, the DP containing the disanaphor morpheme *other/else* must have a contextually salient antecedent, which can be either overt or covert linguistically. Moreover, the antecedent DP and the referent of the DP containing the disanaphor morpheme need to be distinct, which means that they never coincide.

Another point that (47) raises is the need for the containing DP and the antecedent to share a unique relevant identifying property (Isac & Reiss 2002:4). The property that the two share can be a trait such as being human, place, time, etc. In the specific case of (47) the common property was being a morphosyntactic topic, in (49) the common property is being an animal and (50) the common property is being a student.

- (49) John entered the room, # then another animal followed.

- (50) The cat came into the room, # then another student followed.

Having shared properties does not mean that the two items need to be of the same type, rather the element modified by *other/else* and its antecedent need to be members of the same class of things, thus sharing at least one property defined by the head noun. In (49) *John* and *animal* are both animates, but while *John* is a human, *animal* is not, thus *John* is not an appropriate antecedent for *animal*. The same is true also for (50) where *student* is a human, but *cat* is not, thus *cat* is not a good antecedent for *student*. This said, the shared property cannot be limited to features like animate or human, as the antecedent of *student* could not be for example *plumber* either, except if that *plumber* was a student in let's say a school for plumbers, which would make (52) felicitous.

- (51) The plumber came into the room, then another student followed.

- (52) John didn't break the window, there was some other cause for the breaking of the window.

In (52) the NP modified by *other*, namely *cause for the breaking of the window*, can be anything as far as it can be a conceivable reason for the window breaking (e.g. high winds, earthquake, children).

In this section I have defined all the properties of disanaphors like *other* and *else* and their core meaning. Everything that I have said until this point for *other/else* holds also for *altro*.

### 2.3. The syntax of *other* and *altro*

In this section I am going to describe the syntactic distribution and analysis associated with *other* and *altro*. I will present data on English and Italian and I will present an analysis that takes both languages into account (for work on *other* in different languages see Lechner (2010), Charnaval (2015), Oikonomou (2015)). I will not talk about *else* here, but I will focus on a unification of *other* and *else* analytically at some point in the future.

In English we have two forms of *other*, *other* and *another*. Huddleston and Pullum (2002: 391) state that *another* is an historical derivation from the compounding of the indefinite article (*an*) and *other*. *Another* does not co-occur with the indefinite article.

- (53) a. I bought another table.  
b. \* I bought an another table.

Furthermore, *another* blocks the co-occurrence of definite determiners and demonstratives (54), with the exception of lower quantificational expressions such as *few* and *many* (for lower quantificational expressions I mean the quantifiers that are generated low in a syntactic tree, and therefore closer to the noun) (55)-(56). I will refer to them as Q-adjectives as in Zamparelli (2017).

(54) \* the/\* this another table

(55) ? many another table<sup>7</sup>

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<sup>7</sup> As pointed out to me by Pam Munro and Carson Schütze (p.c.), in literary English (55) can be grammatical.

(56) another few students

I take (55)-(56) to demonstrate that although morphologically merged, *another* maintains the indefinite determiner reading and features, and by so doing it does not allow determiners that compete for the same projection in the DP to occur with it (e.g. definite article, demonstratives). However, it is possible for *another* to co-occur with a higher quantifier like the negative quantifier *not*, as in (57).

(57) Not another word.

Additionally, the presence of the indefinite article also blocks the occurrence of any numeral in between the indefinite article and *other*, as in (58)b, something that does not occur with the definite article for example (59).

(58)	a. I bought another three tables.	another-Num-N
	b. * I bought a three other tables.	NOT a-Num-other-N
(59)	a. I bought the other three tables.	the-other-Num-N
	b. I bought the three other tables.	the-Num-other-N

I take this to be a consequence of the compound nature of *another*, which I am going to assume is generated by composition of *other* and *an*. I claim that instead of being an historical derivation, we can consider it to be still productive, one proof of that being the impossibility of a numeral occurring between the indefinite article and *other*.

The data presented so far seems to contradict the possibility that in some varieties of American English *another* is synchronically composed of *a + nother*, as stated by Sailor (p.c.) and

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(i) Many another day will come.

In this case though, even if *many* is present, the noun modified by *another* is singular, which makes me wonder whether we are dealing with a compound of some sort or an idiomatic expression.

reported by Cinque (2016:23), their evidence is the possibility of inserting certain adjectives between *a* and *nother*, as in (60).

- (60) I saw John eat an entire cake, but after I left, he apparently ate a whole *nother* cake. Cinque (2016:23)

However, it seems that the use of *a whole nother* is idiomatic, one evidence being that it is not productive.

- (61) I just hate a \*full/\*little *nother* cake.

When the numeral we use is *one*, neither *another* nor *other* can precede it, independently from its form (62)a-(63)a.

- |      |                                    |                     |
|------|------------------------------------|---------------------|
| (62) | a. * I bought another one table.   | NOT another-one-N   |
|      | b. * I bought a one other table.   | NOT a-one-other-N   |
| (63) | a. * I bought the other one table. | NOT the-other-one-N |
|      | b. I bought the one other table.   | the-one-other-N     |

Thus, *another* and *other* can modify a singular count noun, but not a singular count noun headed by the numeral *one*. Moreover, specifically in (62), the ungrammaticality could be deriving independently from the impossibility of *a* and *one* to co-occur, as Schütze (p.c.) suggested they could be allomorphs.

I am going to claim that we have two locations for *other*, one below the numeral projection and one above it. This idea counters Thomas' (2011) proposal which argues for the existence of two *another*s, depending on their use, each with different semantic and syntactic properties. He claims that *an+other* is an adjectival *other* followed by an existential quantification, this is the *other* that co-occurs with singular nouns (64), while additive *another* is actually an additive operator (65).

- (64) I bought another table.

(65) I bought another three tables.

I will refer the reader to Thomas (2011) for more details on his proposal; but I will offer an alternative analysis which assumes the same meaning for *other* and a compositional derivation of *another*.

The problem raised by Thomas (2011) is in part due to the fact that *another* takes both a singular count noun, as we would expect, as well as a noun with plural quantity, causing a number mismatch between *another* and the noun phrase, something that we would not expect if the singular indefinite maintained its meaning.

(66) I bought another table / \* tables.

(67) I bought another three tables / \* table.

This possibility is not unique to English, since it is also available in Upper Southern varieties of Italian, such as Teramano and Abruzzese Italian (Mantenuto 2016), where *n'andre* and *un'altro e* are able to modify either a singular count noun or a quantified nominal.

- (68) So<sup>8</sup>            cumbrate            n’-andre<sup>9</sup>            tavule.  
be.1SG            bought            a.SG.M-other.SG.M            table.SG.M  
‘I bought another table.’            Teramano
- (69) So            cumbrate            n’-andre            e    tra    tavule.  
be.1SG            bought            a.SG.M-other.SG.M            and    three    table.PL.M  
‘I bought another three tables.’            Teramano
- (70) Ho            comprato            un    altro            tavolo.  
have.1SG            bought            a.SG.M    other.SG.M            table.SG.M  
‘I bought another table.’            Abruzzese Italian
- (71) Ho            comprato            un’-altre<sup>10</sup>            e    tre    tavoli.  
have.1SG            bought            a.SG.M-other.SG.M            and    three    table.PL.M  
‘I bought another three tables.’            Abruzzese Italian

In Teramano and Abruzzese Italian the quantified nominal is possible through a conjunction *e* (‘and’) which is an historical remnant from Latin. In this dissertation I won’t talk in more depth about Teramano (see Mantenuto 2016); I hope to pursue this work further in the future.

There are two additional elements with the same number mismatch as *another*.

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<sup>8</sup> Teramano, unlike Standard Italian and Abruzzese Italian, is a language where the subject person feature drives auxiliary selection in the present perfect (D’Alessandro and Roberts 2010). The choice of the auxiliary (‘be’ or ‘have’) depends entirely on the subject; in the third person singular and plural the auxiliary is always ‘have’, while the first and second person it is consistently ‘to be’, as we can see in (i)-(ii).

- (i) Marie    a                    fatijete/cascate.  
Marie    have.3SG            worked/fallen  
‘Marie has worked/fallen.’
- (ii) Je        so                    fatijete/cascate  
I        be.1SG            worked/fallen  
‘I have worked/fallen.’

<sup>9</sup> The basic form of ‘other’ in Teramano is *addre* ([ad:rə]), but when *addre* is preceded by an indefinite article the nasal feature of the indefinite article spreads and the result is *andre* ([andrə]).

<sup>10</sup> Abruzzese Italian seems to present vowel harmony between the last vowel of *altri* and the coordination *e* following it.

- (72) a. I bought an additional table / \* tables.  
b. I bought an additional three tables / \* table.
- (73) a. I bought an extra table / \* tables.  
b. I bought an extra three tables / \* table.

In both examples the indefinite article is obligatory, similarly to *another*, although of course it is not orthographically reported as one word. Nevertheless, in both cases the indefinite article forms a phonological unit with the following word (*additional*, *extra*), as it does with vowel initial words, *other* being one of them. In all three cases (*other*, *additional* and *extra*) their bare form (their form without the indefinite article) actually permits the plural nouns not headed by a numeral.

- (74) I bought other tables.
- (75) I bought additional tables.
- (76) I bought extra tables.

I will not talk further about *additional* and *extra*, but I take these data to show that assuming two lexical items for *another* would be misleading, as the number mismatch that we see between the indefinite article and the numeral are present in other words as well, which do not share the same meaning. Even more interestingly, *additional* and *extra* can also precede and follow a numeral, similarly to *other*.

- (77) I bought three additional tables.
- (78) I bought three extra tables.

Nevertheless, I am going to leave further exploration of these two items and a possible unified analysis for future work.

More details on the semantics of *another* will be offered in section 2.4; in section 2.3.1 I am going to better define the two positions I proposed for *other*, one below the numeral and one above it.

### 2.3.1. Pinpointing *other* in the DP

As I have previously stated in this section I assume that *other* has two positions within the DP, the first one being below the numeral projection and the other one being above it. However, so far I have not given the exact location of either one of these projections. In this section I define the exact position of *other* within the DP. I propose that the position where *other* is generated is just above the NP projection which includes prenominal adjectives, but below numerals.

(79) D>Num>Other>AP>NP

Support for this idea is the fact that *other* scopes below numbers but not below adjectives.

(80) John ate two doughnuts this morning and then he ate another doughnut in the afternoon.

In (80) the antecedent for *another doughnut* does not match in number with the DP containing *other* which indicates that the number of doughnuts is one. Thus, although it seems that both the antecedent DP and the containing DP need to be about doughnuts, the number does not have to match. This point becomes even clearer when the antecedent DP is in the context and not in the discourse.

(81) A: What did John do?

B: Nothing special, he ate another doughnut.

The antecedent for “another doughnut” is some quantity of doughnuts X which John ate, which is different from the doughnut that is salient in the answer. In (80) the antecedent is ambiguous as to the number of doughnuts John ate. The same is also true if a numeral greater than one is present.

(82) John ate a cookie this morning and then he ate another ten cookies in the afternoon.

In (82) the antecedent does not have to match the number of elements present in the anaphoric DP (*ten*). Moreover, *he ate another ten cookies* is not false because he previously ate only *one cookie*. As a consequence, we do not want the antecedent to be *cookies*, and therefore the plurality needs to remain outside of the anaphoric NP. More on plurality in section 2.4.

It is possible to focus *another* to emphasize that the current set matches the previous set of cookies, thus forming a constituent with ‘another’ and ‘ten’, as in (46).

(83) A: What did John do?

B: Nothing special, he ate ANOTHER ten cookies.

However, although the most salient reading available is the one where the antecedent includes the same numeral (John previously had eaten ten cookies), that is not the only possible reading. The reading where John ate any number of cookies distinct from ten is still available. I refer to work on the intersection between focus and prosody on *other* in Greek by Oikonomou (2015), in the hope of further researching this point in the future.

If we have an adjective it seems that the antecedent DP must share the same adjective as the disanaphoric DP.

(84) A: What did John do?

B: Nothing special, he ate another ten delicious cookies.

The truth of this claim is proven if we use different adjectives in the antecedent DP and in the disanaphoric DP.<sup>11</sup>

(85) # John ate a bad cookie first and then he ate another ten delicious cookies.

The cookie previously eaten in (85) must be delicious as well; however, they do not need to be ten in number. The same observations also hold true for Italian.

(86) Giovanni ha mangiato altri dieci  
 Giovanni have.3SG eaten other.PL.M ten  
 biscotti deliziosi.  
 cookie.PL.M delicious.PL.M  
 ‘Giovanni ate another ten delicious cookies.’

In (86) Giovanni does not have to have eaten ten cookies earlier, as in the English example. Moreover, the previous doughnut to which *other* refers in (87) need to be good as well, as in the English example.

(87) # Giovanni ha mangiato una ciambella scaduta  
 Giovanni have.3SG eaten a.SG.F doughnut.SG.F expired.SG.F  
 prima e poi ha mangiato un’-altra  
 first and then have.3SG eaten a.SG.F-other.SG.F  
 ciambella buona.  
 doughnut.SG.F good.SG.F  
 ‘Giovanni first ate an expired doughnut and then he ate another good doughnut.’

Thus, I will conclude that the original position DP internally of *other* is located above prenominal adjectives but below numerals.

(88) Det>Numeral>Other>AP>NP

---

<sup>11</sup> The judgment on the adjectives seems to differ depending on the adjective in question, further work on the interaction between adjectives and *other* is needed. As Carson Schütze (p.c.) pointed out to me there are cases where different adjectives are possible in the anaphoric DP and in the antecedent DP.

(i) The criminals acquired one real diamond, and another ten fake diamonds.

Prepositional phrases are modifiers occurring on the right of the noun, and similarly to adjectives, also prepositional phrases are under the scope of *other*.<sup>12</sup>

(89) # Giovanni ate a bag of peanuts and then he ate another bag of popcorn.

This point is further proven by the infelicity of examples with non-identical relational nouns as pointed out by Dylan Bumford (p.c.), as in (90).

(90) # I touched a side of the box and then I touched another side of the building.

(91) # Earlier I painted an odd number on the face of this die, now I am going to paint another even number on the face of this die.

(92) # Yesterday I found a picture of my grandmother and today I found another picture of my grandfather.

Thus, complements of N cannot be excluded from the antecedent, so we can conclude that *other* scopes above prepositional phrases.

(93) Det>Numeral>Other>AP>NP>PP

Because of the two possible positions of *other*, Cinque (2016) proposes two distinct functional categories of *other*, each located in a different position within the numeral phrase; he starts by showing it in Italian in the example that I report in (94). In (94)a *altri* occurs before the numeral, while in (94)b *altri* follows the numeral.

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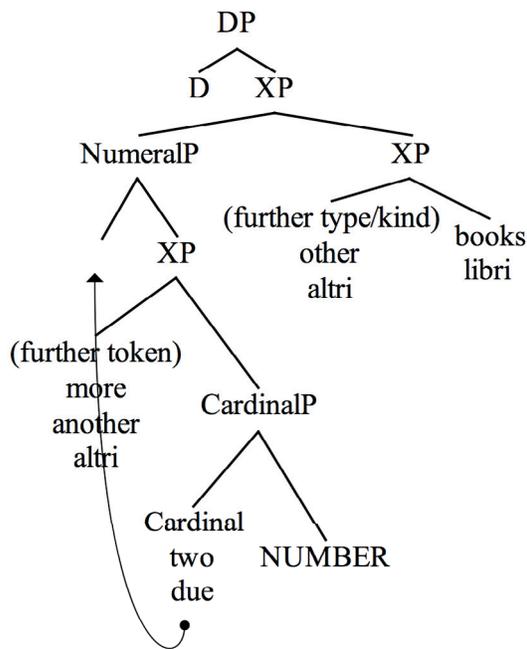
<sup>12</sup> There are two possible analyses for relative clauses, one where the relative directly modifies the noun and one above the whole DP. I am going to assume that the ungrammaticality of (i) is due to the latter and thus I will not investigate it any further.

(i) \*? He ate a doughnut which John bought and he ate another doughnut which Mary made.

- (94) a. (gli) altri due libri di sintassi  
 the.PL.M other.PL.M two book.PL.M of syntax  
 ‘the other two syntax books’
- b. (i) due altri libri di sintassi  
 the.PL.M two other.PL.M book.PL.M of syntax  
 ‘the two other syntax books’<sup>13</sup> (Cinque 2016:1)

Thus, he claims that there are two merging positions for *other*: one below the numeral phrase and one within the numeral phrase.

(95) Cinque (2016:24)<sup>14</sup>



<sup>13</sup> It is important to notice that the order numeral>other is not natural in all varieties of Italian.

<sup>14</sup> This is the same tree drawn by Cinque (2016), the only differences are that I called XP nodes that were otherwise unnamed in the original version, and I took away languages that were not English or Italian.



show that the two word orders available (num>other and other>num) are each matched with a specific reading derived from the same core meaning of *other*.

#### 2.4. Beyond the core meaning

Cinque (2016) compares *another* to the additive particle *more*, observing that there is always an additive reading associated with *another*; however, I argue that *other* is not an additive morpheme. In example (97) I am saying that I want a banana distinct from the one present in the context, whether I had it before, or it has been offered to me, it is underspecified, but the use of *another* in this case triggers the existential presupposition of an antecedent that we have seen in section 2.2.

(97) I would like another banana.

However, there is a second reading that is available, as also pointed out by Huddleston and Pullum (2002), an additive reading. For the purpose of this dissertation I follow Krifka (1998) and define an additive as an item that presupposes that a predication holds for at least one alternative of the expression in focus (indicated by ‘<sub>F</sub>’).

(98) a. Marco also cooked chicken<sub>F</sub> for dinner.

b. 'Marco cooked chicken for dinner (and he cooked something else)'

In (98) the predication Marco cooked holds for at least one alternative element, as is reported in (98)b within the parenthesis. Thus, there is an impression that the additive particle offers a “supplement” in Umbach’s (2012) words. However, I will demonstrate that the disanaphor morphemes are not inherently additives and that the additivity can be derived pragmatically.

Going back to (99), one meaning available for it is that I would like a banana in addition to the one that I already have, the additive reading is made clear when the antecedent context is uttered as in (99).

(99) These bananas are very sweet, I just ate one, I would like another banana.

However, the additive reading can also be lacking, as we see when I change the context, as in (100).

(100) That banana is too ripe, I cannot eat it, I would like another banana.

A further proof to support the idea that *other* is not inherently an additive morpheme is evident when we directly compare it with a well-known additive particle which occurs DP internally, namely *more* (Greenberg 2010, Thomas 2010). If indeed *other* was an additive particle, then it should share the same meaning as *more*; however, that is not the case. In (101) *other* is possible in a scenario where I have not eaten any cheese yet (as in (101)a), while *more* cannot be available in such a scenario (as in (101)b).

(101) Context: I am a snob and I eat only Italian cheese. Unfortunately at the party where I am I have not encountered any Italian cheese yet. Someone offers me some cheddar and I reply.

a. No thanks. I am going to eat another cheese.

b. # No thanks. I am going to eat one more cheese.

Thus, *other* can be used in contexts where additivity is not possible and still be felicitous. Therefore, additivity depends on the context.

In section 2.2, I propose that the core meaning of *other* is one of distinctness, the DP containing *other* needs to be distinct from the antecedent DP to which it refers to. The distinct reading available for *other* can have different outcomes depending on what *other* is directly modifying, whether it is modifying the single individual or the kind of that individual. We can maintain the same distinct reading (introduced in section 2.2), but instead of talking about a different token we can also refer to a different kind/type.

Whether the NP modified by *other* can have a kind reading or a token reading depends on the noun itself. Count and mass nouns can have both a kind reading and a token reading, with the

exception of when it would be pragmatically odd. For example, *cookies* can be ambiguous between being of the same kind (102)a or being of a different kind (102)b.

- (102)      a. Earlier I had a macadamia cookie, and I loved it. I would like another cookie.  
              b. Earlier I had a macadamia cookie, and I hated it. I would like another cookie.

In both (102)a and (102)b, *another* is modifying *cookie*, thus the second cookie is a distinct cookie from the antecedent to which its referring to. Whether the cookie is of the same kind of the previous one or not is due to pragmatics. When I say that I loved my first macadamia cookie I created a context by which the most natural reading is one where I want a distinct cookie token, and when I say that I hated my first macadamia cookie I created a context by which the most natural reading is one where I want a different kind of cookie. Both readings are available; in (102)b *another* is modifying *kind of cookie* rather than *cookie*. Moreover, because of the scenario I have offered, in both sentences I have eaten more than one cookie, triggering also an additive reading.

One striking commonality between both these sentences is that we are always dealing with distinct cookies, whether they are of the same kind (distinct token) or of a different kind (distinct kind) from the antecedent cookie. What seems to change the reading of the meaning associated with *another* in these cases is the context, and the possibility for the noun *cookie* to have a kind reading. I assume that kind is optionally present in the construction of certain nouns (Zamparelli 2000), and I take the different meaning to depend from whether *other* is modifying the NP without kind or the NP with kind.

Proper nouns of actual people cannot be associated with a kind reading.

- (103) Context: in the UCLA department there are two Tims, Tim Stowell and Tim Hunter. In the past Tim Stowell wrote a paper on the partitive clitic *ne* in Italian. I had a meeting with Tim yesterday about the partitive clitic in Italian, tomorrow I am going to meet with the other Tim.

In this case the only possible reading available is a different individual, the different kind reading is not available. Since people (or Tims specifically) are unique in the world, generally speaking, the more readily available reading would be ‘a distinct Tim from the Tim working on the partitive clitic in Italian aka Tim Stowell.’

Finally mass nouns have either meaning available, thus behaving similarly to count nouns. The reason why we are able to count mass nouns is because the speaker might be able to have a silent container noun in his mind although not overtly pronouncing it.

- (104) a. Earlier I had a Simply Orange, and I loved it. I would like another orange juice.  
b. Earlier I had a Simply Orange, and I hated it. I would like another orange juice.

As the contexts in (104)a-b show, the mass noun *orange juice* behaves similarly to the count noun *cookie*, as it can receive either the distinct token or distinct kind reading. In conclusion, the context is very important because it sets up the possibility of picking one of the two available readings, whether distinct kind or the distinct token of x. However, these two readings are available only if the specific noun in the DP allows it. In the case of the Tims we saw that only one reading was available, while in the case of water and cookies both readings were available.

#### **2.4.1. Interaction between *other* and numerals**

In the following part I am going to explore the interaction between numerals and *other*. The order numeral>other is available only with the reading distinct kind, while the order other> numeral is available only with the reading distinct token.

- (105) a. Earlier I had a macadamia cookie, and I loved it. I am going to eat another two cookies / # two other cookies. Same kind context
- b. Earlier I had a macadamia cookie, and I hated it. I am going to eat # another two cookies / two other cookies. Distinct kind context
- (106) a. Earlier I had a Simply Orange, and I loved it. I would like another two orange juices/ #two other orange juices. Same kind context
- b. Earlier I had a Simply Orange, and I hated it. I would like # another two orange juices/ two other orange juices. Distinct kind context

Once again, when I say that I loved my first macadamia cookie I created a context by which the most salient reading is one where I want the same kind of cookie, and when I say that I hated my first macadamia cookie I created a context by which the most salient reading is one where I want a different kind of cookie. The distinct kind reading is possible because the common noun allows that option; however, if it allowed then the preferred word order is numeral>other, where *other* directly modifies the noun.

- (107) a. (An)other>numeral>NP
- b. \* (An)other>numeral>kind of NP
- (108) a. \* Numeral>other>NP
- b. Numeral>other>kind of NP

This is the case of count and mass nouns, both of which present a token and a kind reading.

Proper nouns have unique referents, as we have seen in the Tims case in (103), and they are not alone to lack the distinct kind reading, similarly measure phrases cannot pragmatically have the word *kind* in their DP. A measure noun is any noun a community agrees upon to be a measurement of some sort. People agree on the definition of minutes, kilos, meters etc. For example, a minute consists of 60 seconds, each minute is identical to any other minute and it cannot

differ in any feature from it.<sup>15</sup> Crosslinguistically of course not all measure phrases are identical; however, once everyone agrees upon a system there is no reason to believe that individual tokens of a specific measure phrase are different from each other. Therefore, ontologically, measure phrases are set to be identical in their characteristics and they cannot differ in any way.

What I have said about other scoping below a numeral also works with measure phrases. As a matter of fact although I am asking for five additional minutes, it is independent from having had only five minutes before or not.

(109) A: Give me just 5 minutes.

[5 minutes later]

B: Are you done?

A: (a) No, no almost. Give me another 5 minutes. / (b) Give me another 10 minutes.

Both (109)(a) and (109)(b) are correct and felicitous. The only thing that they indicate is that I need an additional amount of minutes *x* on the top of the interval of time I already had, whether the interval is equal to zero or not. Thus, for measure phrases the only order available is (an)other>numeral>noun.

What is evident in the Italian varieties that present only the order other>numeral is that other obligatorily raises, but also that both the distinct token reading and the distinct kind reading are available.

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<sup>15</sup> Exceptions are cases where we use minutes in a non-standard manner as in (i) (Schütze p.c.).

(i) The longest minute of my life.

- (110) a. Prima ho comprato un biscotto alle  
earlier have.1SG bought a.SG.M cookie.SG.M at.the.PL.F  
mandole, e mi è piaciuto tanto. Vado  
almond.PL.F and to.me be.3SG liked a.lot go.1SG  
a mangiare altri due biscotti.  
to eat.INF other.PL.M two cookie.PL.M  
‘Earlier I had an almond cookie, and I liked it a lot. I am going to eat  
another two cookies.’ Same kind
- b. Prima ho comprato un biscotto alle  
earlier have.1SG bought a.SG.M cookie.SG.M at.the.PL.F  
mandole, e non mi è piaciuto affatto.  
almond.PL.F and not to.me be.3SG liked at.all  
Vado a provare altri due biscotti.  
go.1SG to taste.INF other.PL.M two cookie.PL.M  
‘Earlier I had an almond cookie, and I did not like it at all. I am going to  
try another two cookies.’ Distinct kind

Thus, I am going to assume that in this specific case the meaning associated with the lower position is reconstructed.

Definiteness does not have an effect on the word order, rather it just affects the exhaustiveness and the interpretation of the antecedent.

- (111) a. Earlier I had a macadamia cookie, and I loved it. I am going to eat # the two  
other cookies / the other two cookies.
- b. Earlier I had a macadamia cookie, and I hated it. I am going to eat the two  
other cookies / # the other two cookies.<sup>16</sup>

Definite articles and demonstratives have the ability to introduce a specific set as the antecedent for the DP containing *other* and thus they can result is grammatical in both orders, but if we do not allow picking anything outside the antecedent that we mention then they behave just like the

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<sup>16</sup> The reader might notice that use of focus could rescue ‘the other two cookies’; however, as I said in section 2.3.1 I hope to work on the interaction between *other* and focus in the future.

indefinite cases. In Abruzzese Italian there is only one word order; however, the importance of satisfying the maximality introduced by the definite article is evident if we clarify the number of elements within the set we are referring to.

- (112) Ci sono tre biscotti in questa scatola.  
 CI be.3PL three cookie.PL.M in this.SG.F box.SG.F  
 Ne ho mangiato uno alla mandorla  
 NE have.1SG eaten one.SG.M at.the.SG.F almond.SG.F  
 e mi e' piaciuto molto.  
 and to.me be.3SG liked much  
 Quasi quasi mi mangio gli altri due  
 maybe maybe to.me eat.1SG the.PL.M other.PL.M two  
 biscotti.  
 cookie.PL.M  
 'There are three cookies in this box. I have eaten an almond one and I liked it a lot. Maybe I will eat the other two cookies.'

- (113) Ci sono quattro biscotti in questa scatola.  
 CI be.3PL four cookie.PL.M in this.SG.F box.SG.F  
 Ne ho mangiato uno alla mandorla  
 NE have.1SG eaten one.SG.M at.the.SG.F almond.SG.F  
 e mi e' piaciuto molto.  
 and to.me be.3SG liked much  
 # Quasi quasi mi mangio gli altri due  
 maybe maybe to.me eat.1SG the.PL.M other.PL.M two  
 biscotti.  
 cookie.PL.M  
 'There are four cookies in this box. I have eaten an almond one and I liked it a lot. Maybe I will eat the other two cookies.'

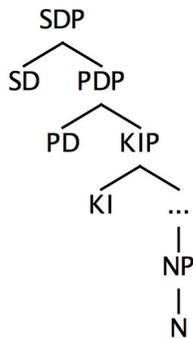
In the following section I am going to look at the higher position of *other* and locate it in the DP.

#### 2.4.2. The order *other*>*numeral*

In order to pinpoint the exact location and the meaning associated with each of the positions where *other/altro* occurs, I need to introduce Zamparelli's (2000) analysis of the DP layers. The need for these layers was generated from the need of more than just the DP and the NP, in order to account for the full complexity of the noun phrase. In particular, Zamparelli (2000) points out the

importance of having three distinct projections, one for a predicative noun phrase, and two for referential noun phrases, the latter being non-specific indefinites and specific indefinites. The advantage of these extra layers is the possibility of having a one-on-one mapping of the correct semantic types (<e,t> for the predicative NP, <e> for the referential NPs). Zamparelli's (2000) has proposed and formalized three layers within the DP (each layer can be repeated as many times as needed): the Strong Determiner Phrase (SDP), the Predicative Determiner Phrase (PDP) and the Kind Determiner Phrase (KIP).

(114)



Zamparelli (2000) describes this structure as follows: the PDP layer denotes a property. SDP and PDP together constitute the “determiner system”, since many determiners can appear within each one of these projections (e.g. quantifiers, demonstratives, articles). Below the PDP layer there is a KIP layer, which include the common noun with its kind reading (‘kind of x’).

Earlier I argued that the difference between common nouns and proper nouns is the presence of kind within the nominal projection of a specific noun. Zamparelli (2000:175) proposes that the basic denotation for common nouns is “kinds of things.” What Zamparelli (2000) means with this basic denotation is that a common noun has two readings, an individual reading and a

subkind reading (subkind corresponds to what I have referred to as “kind” in this chapter), each obtained through the application of two operations: Kinds to Objects (KO) and Kinds to SubKinds (KSK). KO is the operator that derives a set of individuals that are the realizations of a kind; thus, as a result it will produce a set of objects which he labels ‘dog’. KSK is the operator that derives the set of subkinds of a given kind, thus as a result will produce a set of kinds (e.g. in the case of dogs we get Pekinese, Yorkshire, Shizue, Abruzzese Shepard, German Shepard, etc.). Both KO and KSK would apply to KIP and as such they have been located by Zamparelli (2000) as part of the meaning of the head PD. I will refer the reader to Zamparelli (2000) for more in-depth theory of layers.

The same head PD is also the location of plurality within the DP. Plurality refers to plural individuals and not only to singular individuals within the DP (Link 1983, 1987). A regular singular individual for example would be *Nicola* or *the dog*, but we need to account for plural individuals as well, such as *Nicola and Gina* or *the dogs*. Thus, Zamparelli (2000) proposes that the denotation of the plural PDP (for example *dogs*) will contain the set of singular and plural instantiations of the kind *dogs*, so for example the set will contain the singular individual *dogs* and all the plural individuals *dogs* formed by Link’s (1983, 1987) operation of plural sum. The plural individuals are then associated with an “arity” that is equal to the total number of the singular individuals of which it is composed. If an individual is not plural but is singular, then its arity is 1. At the  $PD^{\max}$  level, one of the determiner levels, imposed by Zamparelli (2000), the determiner itself functions as a filter able to eliminate from the realization of KIP all the plural individuals that have a different arity from the one specified by the determiner. So for example, if we have *three* in  $PD^{\max}$ , the only possible set of individuals is the one that has arity equal to three. Assuming this mechanism allow us to justify why an anaphoric DP not only does not match in number to the

antecedent DP, but also allow us to have as an antecedent a singular DP when the anaphoric DP is plural.

Zamparelli (2000) also proposes that each of the layers (PDP, SDP, KIP) corresponds in Italian to a different clitic. According to Zamparelli, *lo*+agreement (*lo/la/li/le*) corresponds to SDP, *lo* without agreement corresponds to PDP and *ne* corresponds to KIP.

Giusti (1992) says that when *ne* appears in clitic left dislocation (CLLD) constructions, it picks up either a bare noun or the string ‘of+N.’ Giusti (1992) thus proposes that *ne* corresponds to a bare NP. One support from Zamparelli for Giusti’s idea is that there are quantifiers that allow partitives but do not allow *ne*.

(115) {Qualcuno/ognuno/ciascuno} dei partecipati.  
 someone/everyone/each one of.the.PL.M participants  
 ‘Someone/everyone/each one of the participants.’ (Zamparelli 2000:140)

(116) Ne conosco {qualcuno/\*ognuno/\*ciascuno} t.  
 NE know.1SG someone/everyone/each one  
 ‘I know some of them.’ (Zamparelli 2000:140)

The partitive is licensed by the weak<sup>17</sup> quantifier *qualche* ‘some’ and by the strong quantifiers *ogni* ‘every’ and *ciasc-* ‘each’; however, *ne* is only licensed by the weak quantifier. *Altro* also licences *ne*, similarly to a weak quantifier, and as such it should be located in the PDP projection.

(117) altri dei partecipanti  
 other.PL.M of.the.PL.M participant.PL.M  
 ‘others of the participants’

(118) Ne conosco altri t.  
 NE know.1SG other.PL.M  
 Literal: ‘I know others of them.’

---

<sup>17</sup> Strong quantifiers are always relational and presuppositional (e.g. all, most). Weak quantifiers are existential (e.g. some, no).

Zamparelli takes the licencing of *ne* to follow from the fact that *ne* is not lexically governed by the verb, but is governed by the PD<sup>max</sup>.

Giusti (1997) said that *ne* is possible with *molti* in Italian but not when *molti* follows the definite article.

- (119) a. Ho visto molti ragazzi.  
 have.1SG seen many.PL.M guy.PL.M  
 ‘I saw many guys.’
- b. Ne ho visti molti t.  
 NE have.1SG seen many.PL.M  
 ‘I saw many of them.’
- (120) a. Ho visto i molti ragazzi.  
 have.1SG seen the.PL.M many.PL.M guy.PL.M  
 ‘I saw the many guys.’
- b. \*Ne ho visti i molti t.  
 NE have.1SG seen the.PL.M many.PL.M

Giusti (1997) points out that *molti* is a quantifier and not a determiner. *Altri* seems to behave syntactically in a similar manner to *molti*, thus motivating the idea that the higher *altri* can raise to a QP position, just like *molti*.

- (121) a. Ho visto altri ragazzi.  
 have.1SG seen other.PL.M guy.PL.M  
 ‘I saw other guys.’
- b. Ne ho visti altri t.  
 NE have.1SG seen.PL.M other.PL.M  
 ‘I saw others of them.’
- (122) a. Ho visto gli altri ragazzi.  
 have.1SG seen the.PL.M other.PL.M guy.PL.M  
 ‘I saw the other guys.’
- b. \*Ne ho visti gli altri t.  
 NE have.1SG seen.PL.M the.PL.M other.PL.M

In (121) *ne* is possible with *altri* when it is bare, but not in (122) when *altri* is preceded by a definite article. Thus so far *altri* and *molte* seem to behave similarly, both of them able to move to a quantifier position, which is above the numeral projection, or in Zamparelli's (2000) layers theory, both of them are in spec-PDP.

When we look at the interaction between *molte* and *altri*, Zamparelli (2000) and Crisma (1991) report the observation that *molte* must precede *altri* (123), while cardinal numerals must follow *altri* (124).

- |       |    |   |                     |                      |                 |   |
|-------|----|---|---------------------|----------------------|-----------------|---|
| (123) | a. | molte<br>many.PL.M<br>'many others of my friends' | altri<br>other.PL.M | (dei)<br>of.the.PL.M | miei<br>my.PL.M | amici<br>friend.PL.M<br>Zamparelli (2000:260)                                   |
|       | b. | * altri<br>other.PL.M                             | molte<br>many.PL.M  | (dei)<br>of.the.PL.M | miei<br>my.PL.M | amici<br>friend.PL.M<br>Zamparelli (2000:260)                                   |
| (124) | a. | ??? tre<br>three                                  | altri<br>other.PL.M | (dei)<br>of.the.PL.M | miei<br>my.PL.M | amici<br>friend.PL.M<br>Zamparelli (2000:261)                                   |
|       | b. | altri<br>other.PL.M                               | tre<br>three        | (dei)<br>of.the.PL.M | miei<br>my.PL.M | amici<br>friend.PL.M<br>'Another three of my friends.'<br>Zamparelli (2000:261) |

Zamparelli (2000) takes this data to show that quantifiers like *molte* and cardinal numerals are not in the same position. In my case, this data shows that the *altri* projection is higher in the DP, but below the SDP projection of *molte* proposed by Zamparelli (2000) which situates *molte* in spec-SDP. I will not argue whether the position of *molte* is correct, rather I will leave my observations about that for future work; however, independently from the exact position of *molte*, *altri* is located below it and it is located in PDP.

Summing up, I have used part of Zamparelli's (2000) DP layers theory to better position *altro* within the DP. As a consequence we know that it behaves similarly to a weak quantifiers and



between English and Italian is that in English and some varieties of Italian *other/altro* would not raise above numerals when having the reading “distinct kind,” while in most varieties of Italian *altro* always raises above numerals. I have concluded that an additive reading of *other/altro* is always available, regardless of the order, depending on the context.

I have not yet motivated the kind of movement that allows *other/altro* to raise; I leave this for future work, though one possibility would be quantifier raising, further work would be necessary in order to prove that.

In the future I hope to give a unified analysis for *else* and *other*, and for the predicative and non-predicative constructions with *other*. However, in this dissertation I will extend the core meaning offered for disanaphors like *other* and *else* to the morpheme *ga* in Mixtec, to prove that disanaphors exist outside Indo-European languages and share the same original syntactic position as well as the same meaning.

## Chapter 3

### A brief grammar of San Sebastián del Monte Mixtec

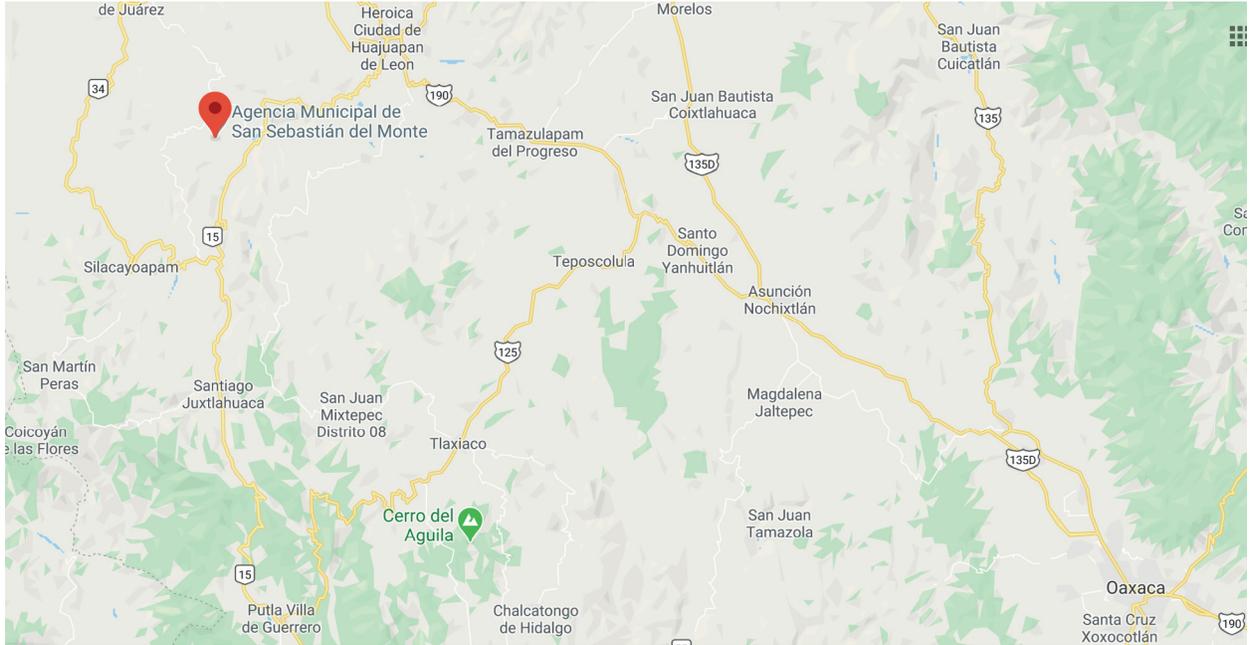
#### 3.1. Introduction

This chapter presents a brief description of San Sebastián del Monte Mixtec (henceforth SSM). Its purpose is to give basic background information to the reader in order to facilitate the presentation of the topics covered in chapters 4 and 5. In section 3.1., I report basic information about the Mixtecan language family. In section 3.2., I discuss the phonology of the language, while in section 3.3., I cover the morphology and the syntax of some of the basic constructions, such as possessives, word order, pronouns, interrogatives, adverbs, verb aspects, adjectives, and negative constructions. Section 3.4. offers a description of the determiner phrase (DP) and section 5 concludes.

#### 3.2. Language family

San Sebastián del Monte Mixtec (ISO: mks) is a language of the Mixtecan family, Otomanguan stock (Rensch 1976). San Sebastián del Monte is a town in the Santo Domingo Tonalá municipality of Oaxaca State, Mexico, in the district of Huajuapán, 45km southwest of Huajuapán de León, with a population of approximately 2000 people.

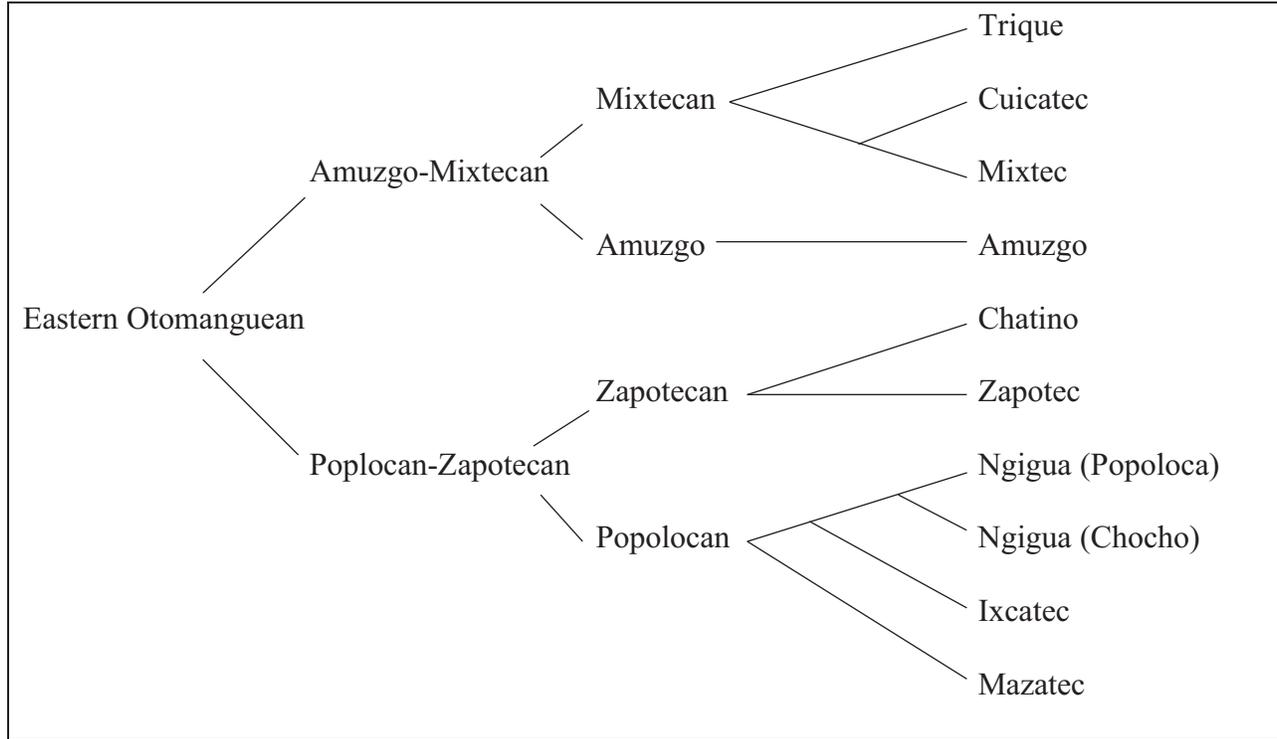
Figure 1. San Sebastián del Monte (Google n.d.)



The majority of the adults in SSM are bilingual in Spanish and Mixtec, except for a few elders that are monolingual Mixtec speakers. The majority of the children under 13 years of age are heritage speakers of Mixtec, some are monolingual Spanish speakers, and a few of them are bilingual speakers of Spanish and English. Heritage speakers are speakers who learned the language at home but never fully developed it because of insufficient input from the social environment.

The Mixtecan language family consists of Mixtec, Cuicatec and Trique. The classification in Figure 2 is still debated and although scholars are aware of its deficiencies, for the purpose of this dissertation I will follow Kaufman's (1988) classification (for more information about this debate see Campbell (2017:3) and Macaulay (1996:5)).

Figure 2. Eastern Otomanguean Languages and Language Families



### 3.3. Phonology

In this section I present the phonemic inventory of SSM. In Tables 1 and 2 I report the vowel inventory of SSM Mixtec. Table 1 has the phonemic vowel inventory while Table 2 reports the corresponding orthographic representation.

Table 1. IPA table: vowels

	Front	Central	Back
	Unrounded	Unrounded	Rounded
High	i	ĩ	u    ã
Mid	e	ẽ	o    õ
Low		a    ã	

Table 2. Orthography table: vowels

	<b>Front</b>	<b>Central</b>	<b>Back</b>
	<b>Unrounded</b>	<b>Unrounded</b>	<b>Rounded</b>
<b>High</b>	i	in	u un
<b>Mid</b>	e	en	o on
<b>Low</b>		a an	

SSM Mixtec has five oral vowels and five nasal vowels. Hiatus (the possibility of two distinct vowels next to each other being pronounced as two distinct syllables) is not available in SSM; whenever *i* or *u* is followed by a non-identical vowel, it will be pronounced as a glide, respectively [j] and [w]. However, when *i* or *u* is followed by an identical vowel then it is considered an unambiguously long vowel, [i:] or [u:] respectively.

Tables 3 and 4 report the consonant inventory of SSM Mixtec.

Table 3. IPA table: consonants

		Bilabial	Dental	Post-Alv.	Palatal	Velar	Glottal
<b>Nasal</b>		m	n		ɲ		
<b>Stop</b>	<b>Unaspirated</b>	p	t			k~g <sup>18</sup>	ʔ
	<b>Prenasalized</b>	<sup>m</sup> p	<sup>n</sup> d~ <sup>nt</sup>				
<b>Affricate</b>				tʃ			
<b>Fricative</b>		b~β~v	s	ʃ    ʒ~j~j		x	
<b>Approximant</b>			r    l				
<b>Glide</b>		w			j		

Table 4 presents the consonant orthography.

<sup>18</sup> /k/ is the underlying form when we have alternation between [k] and [g]. The underlying form for [b], [β] and [v] is /b/, the underlying form for [ʒ], [j] and [j] is /j/. It seems that the underlying form for [ʳd] and [ʳt] is /ʳd/.

Table 4. Orthography table: consonants

		Bilabial	Dental	Post-Alv.	Palatal	Velar	Glottal
<b>Nasal</b>		m	n		ɲ		
<b>Stop</b>	<b>Unaspirated</b>	p	t			k <sup>19</sup>	ʔ
	<b>Prenasalized</b>	mp	nd				
<b>Affricate</b>				ch <sup>20</sup>			
<b>Fricative</b>		v	s	x y		j	
<b>Approximant</b>			r l				
<b>Glide</b>		u			i		

The [k]-[g] alternation is a developing feature of the language, as it is more common in younger speakers than in older speakers. The free variation of [k] and [g], when occurring intervocalically even across a word boundary, is actually limited to the morpheme *ka* on which this dissertation is

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<sup>19</sup> Although my description above mentions that the phones [k] and [g] are not always in free variation, the community has decided to use only <k> to represent both, with the exception of borrowed names (such as Guille) which will use <g>.

<sup>20</sup> [tʃ] can also be written as <ty> in Mixtec. In this dissertation I report it as <ch> because that is currently what the majority of the town members decided during a town hall meeting we had to discuss the orthography.

focused and the morpheme *ko* which is a copula unique to SSM; in all other cases [k] is used, and [g] is limited to few proper names borrowed from Spanish.

(126) Guille ‘Guillermina’ (female name)

An additional observation is that certain sounds occur very infrequently; for example [mp] is present only in borrowed words, and /r/ is used only in borrowed words and in two clitic pronouns (/r/ in other related Mixtec languages corresponds to [l] in SSM).

(127) mpali ‘compadre’/‘godfather’

(128) rá clitic pronoun which refers to liquids

(129) rà clitic pronoun which refers to male humans (man, boy, etc.)

There are three tones in SSM, a high <á>, a mid tone <a>, and a low tone <à>. As in other varieties, each vowel (mora) of a long vowel carries a separate tone and tonal contours are analyzed as sequences of distinct level tones. The vast majority of lexical items are bi- or tri-moraic, though some longer items do exist. No lexical word can be smaller than two moras (Pike 1948, Longacre 1957), but function words can be monomoraic.

(130) VVC: iin ‘uno’/‘one’

(131) CVV: laa ‘pájaro’/‘bird’

(132) CV’V: la’a ‘llorón’/‘weeping’

(133) CVCV: ñáñá ‘cementerio’/‘cemetery’

(134) CVCVCV: chíninò ‘abajo’/‘below’

Syllables in SSM include a vowel that functions as a nucleus, an obligatory onset of one consonant and an optional coda, which does not function as a mora. Short nasal vowels are one mora, as are non-nasal vowels.

Table 5 reports minimal pairs distinguished only by different tones.

Table 5. Tones

HL	LH	ML	LM	MM	HH	LL
jáà	jàá	kaà	kàa	kaa	cháá	yàà
‘caliente’	‘entonces’	‘allá’	‘metal’	‘abundar’ <sup>21</sup>	‘pocos’	‘ceniza’
‘hot’	‘then’	‘there’	‘metal’	‘be abundant’	‘few’	‘ashes’

The main focus of this dissertation is the syntax and semantics of the morpheme *ga*, so I refer the reader to other work on the phonetics and phonology of Mixtec. Please see Cortés, Mantenuto and Steffman (in progress) with specific information on SSM, and for other varieties see Bradley & Hollembach (1988, 1990, 1991, 1992), Campbell (2016), Castillo Martínez (2011), Daly & Hyman (2007), Hollembach (2015), León Vázquez (2017), Macaulay (1996), Palancar (2016), Palancar & Léonard (2016), Pike (1944), Pike (1948), and Peters (2018), among others.

### 3.4. Morphology and syntax

This section covers some basics of SSM morphosyntax relevant to the topics discussed in this dissertation.

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<sup>21</sup> Although the potential form in isolation is translated as an infinitive, in reality this language does not have an infinitive form; however, as the potential is used as the base form when native speakers are asked to say a verb in isolation it is common for them to translate the Mixtec potential into the Spanish infinitive.





If the object is the topic or focus, the object itself is found preverbally, but the object cannot be doubled with a clitic, unlike a preverbal subject.

- (140) *Vàsò tà'vi Lupe.*  
 Vàsò tà'vi Lupe  
 vase break.COMP Lupe  
 'Lupe rompió el vaso.'/'El vaso es lo que rompió Lupe.'  
 'Lupe broke THE VASE.'/'As for the vase, Lupe broke it.' O<sub>FOCUS</sub>VS/O<sub>TOPIC</sub>VS

The distinction between when the object is topic and when it is focus depends only on context. There is no prosodic difference in SSM between elements in topic or focus, nor are there topic or focus specific markers in the morphology.

An oblique argument can also be the focus or the topic, in which case it will occur preverbally and similarly to the object it will depend on the context if it is the focus or the topic.

- (141) *Nòò Liya tiaa Juan iin kartá.*  
 Nòò Liya tiaa Juan iin kartá  
 to Liya write.COMP Juan one letter  
 'A LIYA, Juan escribió la carta.'  
 'TO LIYA, Juan wrote a letter.' PP<sub>FOCUS</sub>VSO/ PP<sub>TOPIC</sub>VSO

- (142) *Nòò mesa chínò Liya siyò.*  
 Nòò mesa chínò Liya siyò  
 on table put.COMP Liya comal  
 'SOBRE LA MESA, Liya puso el comal.'  
 'ON THE TABLE, Liya put the comal.' PP<sub>FOCUS</sub>VSO/ PP<sub>TOPIC</sub>VSO

It is also possible to have other elements preverbally, such as adverbs, depending on the information structure of the sentence.

- (143) *Kama kána kóno Juan.*  
 Kama kána kóno<sup>24</sup> Juan.  
 fast leave.CONT run.CONT Juan  
 ‘Juan corre RÁPIDO.’  
 ‘Juan runs FAST.’ Adv<sub>FOCUS</sub>VS

Finally, predicative adjectives behave like verbs, occurring at the beginning of the sentence in a neutral reading (144), without a copula.

- (144) *Jikó Liya.*  
 jikó Liya  
 be.tall Liya  
 ‘Liya es alta.’  
 ‘Liya is tall.’ VSO

### 3.4.2. Pronouns

SSM has 17 different clitic pronouns (given in Table 6). Of these, the first and second person non-honorific singular and plural have an independent pronoun alternant, while all others have only a clitic pronoun form. The first and second person non-honorific singular and plural clitic pronouns can function only as a subject clitic in a sentence, but not as an object clitic, in which case their independent pronoun counterparts must be used. The third person pronouns referring to non-humans are neutral as to number: they have the same form for the singular and the plural. Moreover, the third person pronouns can be used both as subject clitics and as object clitics, and they lack an independent pronoun counterpart. Male humans have two clitic pronouns that can be used to refer to them, *rà* and *ti*, both of which can be used to indicate both singular and plural. There is no difference in meaning or distribution between these two pronouns, to the best of my knowledge. The plural masculine pronoun (*nà*) can be used also for a mixed group of women and men. Finally, the third column, the “original noun” column, includes all the nouns from which

<sup>24</sup> The verb for ‘run’ is one example of compound verb in SSM.

many of the clitics have originally derived (De León 1988, Macaulay 1996), but specifically for SSM.

Table 6. Pronouns

Pronoun	Clitic pronouns	Independent pronouns	Original noun
	Subject/Object	Subject/Object	
1SG <sup>25</sup>	=ì	yu'u	---
2SG	=ó	yo'o	---
2SG.HON <sup>26</sup>	=ní	---	---
1PL.INC	=yó	yó	---
1PL.EXC	=ndì	ndù'(ù) <sup>28</sup>	---
2PL	=ndó	ndò'(o)	---
3HUM.SG.F <sup>27</sup>	=ñá	---	ñá'a 'woman'
3HUM.SG.HON	=sì	---	---

<sup>25</sup> First and second person pronoun clitics can be used only as subjects; the independent pronoun counterparts are used as objects.

<sup>26</sup> The honorific pronouns are used for older people, people in higher social classes, or people with roles in the municipality (*cargos*). They can be used to refer or address both women and men, and they can be used for God.

<sup>27</sup> The various feminine and masculine pronouns can be used to refer to both adults and children.

<sup>28</sup> The second vowel in some pronouns is not pronounced in fast speech.

3HUM.PL.M	=nà	---	---
3HUM.PL.F	=ná	---	ná'a 'women'
3HUM.M	=rà	---	---
3man	=ti	---	tiàa 'man'
3animal	=tí	---	kiti 'animal'
3spherical	=ti	---	tiluu 'spherical'
3liquid	=rá	---	tikuii 'water'
3thing	=ña      =Vn	---	ña'a 'thing'
3wood	=tó	---	yitò 'tree'

*V* in the dependent pronoun referring to things when used as an object agrees in place with the final vowel of the element it cliticizes to. When the final vowel of the element the pronoun cliticizes to is [i] there is partial agreement with the *V* of the dependent pronoun, while when the final vowel of the element the pronoun cliticizes to is [u] there is total agreement.

- (145)    *titóon si èn*  
titóon=**si=èn**  
star=POSS=3thing  
'su estrella'  
'its star' (referring to a fictional context where the star is owned by a stone)





- (157) *Mee rà sàsi tí.*  
 Mee=rà            sàsi=tí  
 BASE=3HUM.M eat.COMP=3animal  
 ‘ÉL lo comió.’  
 ‘HE ate it.’ SVO

However, when a clitic attaches to the base clitic *mee* it is ambiguous between being the subject or the focused/topicalized object of the sentence (159). When the independent pronoun occurs preverbally there is no ambiguity and it can only function as a subject (160).

- (158) *Ó kàni Juan.*  
 \* Ó            kàni            Juan  
 2SG    hit.COMP            Juan SFOCUSVO

- (159) *Mee=ó kàni Juan.*  
 Mee=ó            kàni            Juan  
 BASE=2SG    hit.COMP            Juan  
 ‘TÚ golpeaste a Juan.’  
 ‘YOU hit Juan.’ SFOCUSVO

- (160) *Yo ’ó kàni Juan.*  
 Yo ’ó            kàni            Juan  
 2SG.IND            hit.COMP            Juan  
 ‘TÚ golpeaste a Juan.’  
 ‘YOU hit Juan.’ SFOCUSVO

The first and second person clitic pronouns cannot occur as objects; they require the pronominal base *mee* instead (161)-(166) or the corresponding independent pronoun when available (in the case of the second person singular honorific for example there is no independent pronoun form) (167)-(169).

- (161) *Kàni Juan \*(mee) ní.*  
 Kàni            Juan    \*(mee)=ní  
 hit.COMP            Juan    BASE=2SG.HON  
 ‘Juan te golpeó.’  
 ‘Juan hit you.’ VSO

- (162) *Kàni rà \*(mee) ní.*  
 Kàni=rà \*(mee)=ní  
 hit.COMP=3HUM.M BASE=2SG.HON  
 ‘Él te golpeó.’  
 ‘He hit you.’ VSO
- (163) *Kàni nà \*(mee) ní.*  
 Kàni=nà \*(mee)=ní  
 hit.COMP=3.HUM.PL BASE=2SG.HON  
 ‘Ellos te golpearon.’  
 ‘They hit you.’ VSO
- (164) *Kàni Juan \*(mee) ó.*  
 Kàni Juan \*(mee)=ó  
 hit.COMP Juan BASE=2SG  
 ‘Juan te golpeó.’  
 ‘Juan hit you.’ VSO
- (165) *Kàni rà \*(mee) ó.*  
 Kàni=rà \*(mee)=ó  
 hit.COMP=3HUM.M BASE=2SG  
 ‘Él te golpeó.’  
 ‘He hit you.’ VSO
- (166) *Kàni nà \*(mee) ó.*  
 Kàni=nà \*(mee)=ó  
 hit.COMP=3HUM.PL BASE=2SG  
 ‘Ellos te golpearon.’  
 ‘They hit you.’ VSO
- (167) *Kàni Juan yo ’o.*  
 Kàni Juan yo’o  
 hit.COMP Juan 2SG.IND  
 ‘Juan te golpeó.’  
 ‘Juan hit you.’ VSO
- (168) *Kàni rà yo ’o.*  
 Kàni=rà yo’o  
 hit.COMP=3HUM.M 2SG.IND  
 ‘Él te golpeó.’  
 ‘He hit you.’ VSO

- (169) *Kàni nà yo 'o.*  
 Kàni=nà                      yo'o  
 hit.COMP=3HUM.PL      2SG.IND  
 'Ellos te golpearon.'  
 'They hit you.'

VSO

In Table 7 I report all the possible combinations of pronominal base and clitic pronouns. However, while in this section I have shown that when it comes to the first and second clitic pronoun we must use the pronominal base to use them in an object position, in the n section 3.4.3 I report occurrences of the pronominal base+clitic where there is a different meaning associated with it. More work will be necessary in order to really understand the function of the pronominal base *mee*.

Table 7. Pronouns with pronominal base

Pronoun	Subject/Object	
1SG	mee=i	
2SG	mee=o	
2SG.HON	mee=ni	
1PL.INC	mee=yo	
1PL.EXC	mee=ndi	
2PL	mee=ndo	
3HUM.SG.F	mee=na	
3HUM.SG.HON	mee=si	
3HUM.PL.M	mee=na	
3HUM.PL.F	mee=na	
3HUM.M	mee=ra	
3man	mee=ti	
3animal	mee=ti	
3spherical	mee=ti	
3liquid	mee=ra	
3thing	mee=na	mee=en
3wood	mee=to	

### 3.4.3. Pronominal base

The pronominal base *mee* has been referred to as emphatic marker by Macaulay (1996). It can be used in four environments: (i) when the subject/object pronoun is emphasized (170)-(173), (ii) when the subject/object pronoun is topicalized (174).

All the cases where the subject or object pronoun uses the pronominal base and the clitic there is an emphatic meaning associated with it, compared to when we use the independent form of the pronoun. What is the nature of that emphatic meaning will require further investigation in the future.

- (170) *Kónì meé na.*  
Kón=i                      meé=na  
love.CONT=1SG              BASE=HUM.3PL  
'Yo LOS amo.'  
'I love THEM.'
- (171) *Meé èn sisi Chuchi.*  
Meé=èn                      sisi                      Chuchi  
BASE=3thing              eat.COMP              Chuchi  
'En cuanto a ellos, Chuchi los comió.'/'Chuchi LOS comió.'  
'As for them [the beans], Chuchi ate them.'/'Chuchi ate THEM.'
- (172) *Kóni mee na yu'u.*  
Kóni              mee=na              yu'u  
love.CONT              BASE=HUM.3PL 1SG.IND  
'ELLOS me aman.'  
'THEY love me.'
- (173) *Mee na kóni yu'u.*  
Mee=na              kóni                      yu'u  
BASE=3HUM.PL love.CONT              1SG.IND  
'ELLOS me aman.'  
'THEY love me.'

- (174) *Mee nakóni na yu'u.*  
 Mee=na      kóni=na      yu'u  
 BASE=3HUM.PL love.CONT=3HUM.PL      1SG.IND  
 'En cuanto a ellos, ellos me aman.'  
 'As for them, they love me.'

(iii) *Mee* is used when the subject/object functions as a reflexive.

- (175) *Kóni Chuchi meé rà.*  
 Kóni      Chuchi      meé=rà  
 love.POT      Chuchi      BASE=3HUM.M  
 'Chuchi se ama.'  
 'Chuchi loves himself.'

- (176) *Kusi rà manzana si mèe rà.*  
 Kusi=rà      manzana=si      mèe=rà  
 eat.FUT=3HUM.M      apple=POSS      BASE=3HUM.M  
 'Él va a comer su propia manzana.'  
 'He will eat his own apple.'

Reflexives with verbs such as 'wash' do not use *mee*, instead when used as reflexives need obligatory the presence of the possessor and when they are not used as reflexives they do not.

- (177) a. *Nàkatiaì nda'ai.*  
 Nàkatia=ì      nda'a=\*(i)  
 wash.CONT=1SG      hand=1SG  
 'Me lavé mis manos.'  
 'I washed my hands.'
- b. *Nàkatiaì kò'ò.*  
 Nàkatia=ì      kò'ò  
 wash.CONT=1SG      plate  
 'Lavé los platos.'  
 'I washed the plates.'

When we use *mee* with reflexives like 'wash' it functions like a complex anaphoric element which emphasizes the reflexivity.

- (178) a. *Nàkatia Chuchi nda'a rà.*  
 Nàkatia Chuchi nda'a=rà  
 wash.CONT Chuchi hand=3HUM.M  
 'Chuchi se lavó sus manos.'  
 'Chuchi washed his hands.'
- b. *Nàkatia Chuchi nda'a mee rà.*  
 Nàkatia Chuchi nda'a mee=rà  
 wash.CONT Chuchi hand BASE=3HUM.M  
 'Chuchi se lavó sus propias manos.'  
 'Chuchi washed his own hands.'

(iv) There is a fourth case, where a pronoun which does not have an independent counterpart needs *mee* to occur in object position. Such pronoun in SSM is only *ní*.

- (179) *Kàni Juan \*(mee) ní.*  
 Kàni Juan \*(mee)=ní  
 hit.COMP Juan BASE=2SG.HON  
 'Juan te golpeó.'  
 'Juan hit you.'

#### 3.4.4. Possession

The clitic pronouns can be used as possessive pronouns as well. The possessive construction in SSM is formed by placing the possessor to the right of the possessed element. If the possessed element is alienable then the possessive clitic *si* is placed between the possessum and the possessor.

- (180) a. *vòti sí Genia*  
 vòti=sí Genia  
 bucket=POSS Genia  
 'la cubeta de Genia'  
 'Genia's bucket'
- b. \* *vòti Genia*  
 \* *vòti Genia*  
 bucket Genia

If the possessed element is inalienable the possessive particle can occur (although it does

not have to). In the case of body parts, when the same element can have two meanings, each meaning will depend on whether the possessive particle is present or absent. If the possessive particle is absent the body part is interpreted as inalienable (181)a; if it is present the body part is interpreted as an alienable noun (181)b.

- (181) a. *xini Liya*  
 xini Liya  
 head Liya  
 ‘la cabeza de Liya’  
 ‘Liya’s head’
- b. *xini sì Liya*  
 xini=sì Liya  
 head=POSS Liya  
 ‘la cabeza de Liya’  
 ‘Liya’s head’ (where the head belongs to Liya but it is not actually her own head)

If the possessed element is animate and inalienable then the possessive particle can be used only when answering a question, although less commonly. Its function seems to be affirming that the possessive is not in question. The question inquiries about the possessor, as in “whose grandmother is she?” (182) or “whose aunt is she?” (183).

- (182) a. *nana káno Maxi*  
 nana káno Maxi  
 mother big.SG Maxi  
 ‘la abuela de Maxi’  
 ‘Maxi’s grandmother’
- b. *nana káno sí Maxi*  
 nana káno=sí Maxi  
 mother big.SG=POSS Maxi  
 ‘la abuela de Maxi’  
 ‘Maxi’s grandmother’

- (183) a. *xixì*  
 xix=i  
 aunt=1SG  
 ‘mi tía’  
 ‘my aunt’
- b. *xixi sí*  
 xixi=sí=i  
 aunt=POSS=1SG  
 ‘mi tía’  
 ‘my aunt’

### 3.4.5. Classifiers

SSM has noun classifiers, but it does not have numeral classifiers. Noun classifiers occur in a noun phrase, independently from other constituents inside or outside of the noun phrase (Aikhenvald 2000). De León (1988) claims that the morphemes referring to full nouns are grammaticalized into a set of classifiers and personal pronouns in some Mixtec varieties. The same is true in SSM as Table 8 shows; however, we can observe that only the third person pronouns have a classifier counterpart, with the exception of the third person masculine *rà*.

Table 8. Third person classifiers and pronoun clitics

	Original noun	Classifiers	Pronouns
HUM.SG.F	ñá'a 'woman'	ñá	=ñá
HUM.PL.M	na'a ---	nà	=nà
HUM.PL.F	ná'a 'women'	ná	=ná
animal	kiti 'animal'	tí	=tí
man	tiàa 'man'	ti	=ti
spherical	tiluu 'spherical'	tí <sup>29</sup>	=tí
liquid	tikuìi 'water'	tì	=tì
thing	ñà'a 'thing'	ña	=ña
wood	yitò 'tree'	tó	=tó

### 3.4.5.1. Classifier+N

Nominal classifiers must co-occur with a noun (184), and in some cases the noun and the classifier are not divisible (185).

- (184) a. *tondika*  
to-ndíka  
CFR: wood-banana  
'árbol de plátano'  
'banana tree'
- b. *ndika*  
ndika  
banana  
'plátano'  
'banana'

<sup>29</sup> There have been various speculations on why the classifiers for spherical things and for animals are homophonous (as also in other varieties of Mixtec, for example San Martín Peraz (Ostrove 2017)), one of them being that there is a fairy tale about a rabbit in the moon, and thus the connection between something round (the moon) with an animal (the rabbit).

- (185) a. *tiya'ka*  
 ti-ya'ka  
 CFR:animal-fish  
 'pescado'  
 'fish'
- b. \**ya'ka*  
 \**ya'ka*

However, it is not the case that every noun needs to have a classifier.

- (186) *mi'ndià*  
 mí'ndià  
 nopal  
 'nopal'  
 'nopal'

- (187) *laà*  
 laà  
 bird  
 'pájaro'  
 'bird'

The meaning of the classifier+N is often the result of the composition of the meaning of its parts.

- (188) *tĩnòñò*  
 tí-ñòñò  
 CFR:animal-honey  
 'abeja'  
 'bee'

- (189) *tikachi*  
 tí-kachi  
 CFR:animal-cotton  
 'cordero'  
 'lamb'

These classifier+N constructions cannot be modified in their parts (190), unlike NP+NP (NP of NP) constructions (191), but similarly to N+N compounds (192).

- (190) a. *tótindíxi ká'no*  
 tó-tindíxi ká'no  
 CFR:wood-pomegranate big.SG  
 'árbol grande de granada'  
 Lit.: 'big pomegranate tree' / \* 'tree of big pomegranates'
- b. \* *tóká'no tindíxi*  
 \* tó-ká'no tindíxi  
 CFR:wood-big.SG pomegranate
- (191) a. *toyiká kui'i ká'no*  
 toyiká kui'i ká'no  
 basket fruit big.SG  
 'canasta de fruta grande'  
 Lit.: 'basket of big fruit'
- b. *toyiká ká'no kui'i*  
 toyiká ká'no kui'i  
 basket big.SG fruit  
 'canasta grande de fruta'  
 Lit.: 'big basket of fruit'
- (192) a. *ve'e ño'o ká'no*  
 ve'e ño'o ká'no  
 house land big.SG  
 'iglesia grande'  
 'big church'
- b. \* *ve'e ká'no ño'o*  
 \* ve'e ká'no ño'o  
 house big.SG land

Finally, there are few differences between N+N and classifier+N; for example, in classifier+N, it is not possible to substitute the full noun for the classifier.

- (193) a. *tóndika*  
 tó-ndika  
 CFR:wood-banana  
 'árbol de plátano'  
 'banana tree'
- b. \* *yitó ndika*  
 \* yitó ndika  
 tree banana

### 3.4.5.2. Classifier+Adj

Another occasion in which classifiers occur is with adjectives, causing nominalization of the adjective. While other varieties of Mixtec have a specific nominalizer morpheme for this task (e.g. Chalcatongo Mixtec in Macaulay (1996)), SSM can use any of the classifiers instead.

- (194)    *ñavixi*  
          *ña-vixi*  
          CFR:thing-sweet  
          ‘dulce’  
          ‘sweet’
- (195)    *tilo’ò*  
          *ti-lo’ò*  
          CFR:spherical-small.SG  
          ‘pequeña cosa esférica’  
          ‘small spherical one’
- (196)    *tólo’ò*  
          *tó-lo’ò*  
          CFR:wood-small.SG  
          ‘pequeña cosa de leña’  
          ‘small wood one’

One might think that it is possible to substitute the noun for the classifier in this case, but in reality there is a change in meaning.

- (197)    a.    *tilo’ò*  
                  *ti-lo’ò*  
                  CFR:spherical-small.SG  
                  ‘pequeña cosa esférica’  
                  ‘small spherical one’
- b.    *tikui’ì lo’ò*  
                  *tikui’ì lo’ò*  
                  fruit    small.SG  
                  ‘fruta pequeña’  
                  ‘small fruit’

- (198) a. *tólo'ò*  
 tó-lo'ò  
 CFR:wood-small.SG  
 'pequeña cosa de madera'  
 'small wood one'
- b. *yitò lo'ò*  
 yitò lo'ò  
 tree small.SG  
 'pequeño árbol'  
 'small tree'

Moreover, changing the classifier we can derive different nouns from the same adjective.

- (199) a. *tikui'na*  
 ti-kui'na  
 CFR:man-bad  
 'ladrón'  
 'thief'
- b. *takuí'na*  
 ta-kuí'na  
 CFR:hon-bad  
 '[jefe] ladrón'  
 '[head] thief'
- c. *ñàkui'ná*  
 ñà-kui'ná  
 CFR:thing-bad  
 'bienes robados'  
 'stolen thing'

### 3.4.5.3. Classifier+Demonstratives

Finally, it is possible for the classifier to co-occur with a demonstrative.

- (200) *Chika'nó tikaá.*  
 Chika'nó \*(ti-)kaá  
 fat CFR:HUM.SG.M-that  
 'Él está gordo.'  
 'He is fat.' Lit.: 'That one is fat.'

### 3.4.6. Verbs and aspects

There are three basic aspects in SSM: continuative, potential and completive.<sup>30</sup> Examples of these with simple English glosses are given in (201) below:

(201)	a.	<i>chichi</i>	b.	<i>chíchi</i>	c.	<i>chìchi</i>
		chichi		chíchi		chìchi
		suck.POT		suck.CONT		suck.COMP
		‘va a chupar’		‘chupa’		‘chupó’
		‘will suck’		‘sucks’		‘sucked’

The examples in (201) are all marked by tones; however, for more information on the different ways that information can be realized on a verb in SSM refer to Mantenuto and Roberts (2018); one way to mark the completive aspect morphologically and that will be present in this dissertation is the prefix *ni*.

(202)	a.	<i>yi’vi</i>	b.	<i>yí’vi</i>	c.	<i>nìyi’vi</i>
		yi’vi		yí’vi		nì-yi’vi
		be.afraid.POT		be.afraid.CONT		COMP-be.afraid
		‘va a tener miedo’		‘tiene miedo’		‘tuvo miedo’
		‘will be afraid’		‘is afraid’		‘was afraid’

Potential aspect is used when events are possible, probable or potential, for instance in the future (203), the conditional (204), or the imperative (205)-(208).

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<sup>30</sup> As Macaulay (1996) points out, many different terms are used in the Mixtecan tradition for these three aspects: “potential” and “realis” (used by her), “potential” and “continuative” (Bradley and Hollenbach, 1988, 1990, 1991, 1992, all of which are SIL grammars; Pike 1948; among others), “incompletive” and “continuative” (Bradley 1970), “irrealis” and “realis” (Bickford and Marlett 1989) to name just a few. I use the terms “potential,” “continuative” and “completive,” which are the terms used in the SIL grammars (Bradley and Hollenbach, 1988, 1990, 1991, 1992).

- (203) *Kueen rà xità.*  
 Kueen=rà                    xità  
 buy.POT=3HUM.M        tortilla  
 ‘Él va a comprar una tortilla.’  
 ‘He will buy a tortilla.’
- (204) *Tá nákoo xò’ó siì kueeni xità.*  
 Tá      nákoo            xò’ó    si=i                    kueen=i            xità  
 if      have.CONT      money POSS=1SG    buy.POT=1SG    tortilla  
 ‘Si tuviera dinero compraría tortillas.’  
 ‘If I had money I would buy tortillas.’
- (205) *Kueen xità.*  
 Kueen(\*=ó)    xità  
 buy.POT=2SG    tortilla  
 ‘¡Compra una tortilla!’  
 ‘Buy a tortilla!’
- (206) *Kueen ní xità.*  
 Kueen=ní                                    xità  
 buy.POT=2HUM.SG.HON                tortilla  
 ‘¡Que compre una tortilla!’  
 ‘Buy [honorific] a tortilla!’
- (207) *Òòn kueenó xità.*  
 Òòn                    kueen=ó                    xità  
 NEG.IRR            buy.POT=2HUM.SG        tortilla  
 ‘¡No compres una tortilla!’  
 ‘Don’t buy a tortilla!’
- (208) *Òòn kueen ní xità.*  
 Òòn                    kueen=ní                                    xità  
 NEG.IRR            buy.POT=2HUM.SG.HON                tortilla  
 ‘¡No compre una tortilla!’  
 ‘Don’t buy [honorific] a tortilla!’

As is evident in (205), in the affirmative informal imperative the subject is never present.

The continuative is used for actions that are under way, habitual or finished shortly before the speech time.

- (209) Context: Jesus goes to the market every day and buys a tortilla.  
*Sé'en rà xità.*  
 Sé'en=rà                    xità  
 buy.CONT=3HUM.M    tortilla  
 'Él compra una tortilla.'  
 'He buys a tortilla.'
- (210) Context: We are looking at Jesus who is on the other side of the road and he is buying a tortilla as we speak.  
*Sé'en rà xità.*  
 Sé'en=rà                    xità  
 buy.CONT=3HUM.M    tortilla  
 'Él está comprando una tortilla.'  
 'He is buying a tortilla.'

The completive is used to express that an event finished by the time of the speech act.

- (211) *Sè'en rà xità kònì.*  
 Sè'en=rà                    xità                    kònì  
 buy.COMP=3HUM.M    tortilla                yesterday  
 'Él compró una tortilla ayer.'  
 'He bought a tortilla yesterday.'
- (212) *Tika sè'enì xità.*  
 Tika    sè'en=i                    xità  
 Just    buy.COMP=1SG            tortilla  
 'Apenas acabo de comprar una tortilla.'  
 'I just bought a tortilla.'

For more information about aspect and tone interaction in SSM see Mantenuto & Roberts (2017).

### 3.4.7. Interrogatives

Questions in SSM, whether they are polar questions or wh-questions, can be optionally marked by the use of the sentence initial question marker *a*, although more commonly no question marker is used.

(213) (A) *konó iin siyò?*  
 (A) kon=ó iin siyò  
 Q want.CONT=2SG one comal  
 ‘¿Quieres un comal?’  
 ‘Do you want a comal?’

(214) (A) *ndiaa kùu sísi Chuchi?*  
 (A) ndiaa kùu sísi Chuchi  
 Q what be.COMP eat.CONT Chuchi  
 ‘¿Qué está comiendo Chuchi?’  
 ‘What is Chuchi eating?’

### 3.4.7.1. Polar questions

Yes/no questions can be marked by a question particle, but they do not have to be. Their word order can vary depending on the element that focused in the polar question. It is possible that the tone is floating when the question marker is absent and that tone sandhi occurs; however, further work on tone sandhi would be necessary to confirm what is an impressionistic observation.

(215) a. (A) *konó siyò?*  
 (A) kon=ó siyò  
 Q want.CONT=2SG comal  
 ‘¿Quieres un comal?’  
 ‘Do you want a comal?’

b. (A) *sìyò konó?*  
 (A) sìyò kon=ó  
 Q comal want.CONT=2SG  
 ‘¿Es un comal lo que quieres?’  
 ‘Is it a comal that you want?’

### 3.4.7.2. Wh-questions

Wh-questions are formed by an interrogative wh-word or phrase in focus position. There is no way to distinguish between a wh-word which is subject or object because the wh-word is always fronted and SSM does not mark case and because there is no clitic pronoun with a subject wh-word.

- (216) a. *Nayòò sàsi no'ò Chuchi?*  
 Nayòò sàsi no'ò Chuchi  
 who eat.COMP tooth Chuchi  
 '¿Quién mordió a Chuchi?'/ '¿Quién mordió Chuchi?'  
 'Who bit Chuchi?'/ 'Who did Chuchi bite?'
- b. \* *Sàsi no'ò nayòò Chuchi?*  
 \* sàsi no'ò nayòò Chuchi  
 eat.COMP tooth who Chuchi
- c. \* *Sàsi no'ò Chuchi nayòò?*  
 \* sàsi no'ò Chuchi nayòò  
 eat.COMP tooth Chuchi who

Table 9 reports all the wh-words present in SSM.

*Table 9. Wh-words in SSM*

Wh-word in English	Wh-word in Mixtec
What	Ndiaa *(kùù)
Who	Nayòò
Whose	Nayòò...sì
When	Amá
Why	Ndiaa *(chíñò)
Where	Ndiaa (chí)
Which/What + Noun	Ndiaa
How	Ndixaa
How many/How much	Najaa

A peculiarity of the word for 'what' is that it always occurs with the copula *kùú*.

- (217) a. *Ndiaa kùú kusi Chuchi?*  
 Ndiaa kùú kusi Chuchi  
 what be.COMP eat.POT Chuchi  
 ‘¿Qué va a comer Chuchi?’  
 ‘What will Chuchi eat?’ (Lit.: ‘What is that Chuchi will eat?’)
- b. *Ndiaa kùú chijó Liya?*  
 Ndiaa kùú chijó Liya  
 what be.COMP cook.COMP Liya  
 ‘¿Qué cocinó Liya?’  
 ‘What did Liya cook?’ (Lit.: ‘What is that Liya cooked?’)

The other wh-words are exemplified below:

- (218) *Ndiaa kúú ti tìn yo’ó?*  
 Ndiaa kúú ti=tìn yo’ó  
 What be.COMP CFR:3animal 2SG.IND  
 ‘¿Qué te mordió?’  
 ‘What bit you?’ (Lit.: ‘What is the one (animal) that bit you?’)
- (219) *Nayòò sèen nòni?*  
 Nayòò sèen nòni?  
 who buy.COMP corn  
 ‘¿Quién compró el maíz?’  
 ‘Who bought the corn?’

A special case when ‘what’ and not ‘who’ is used is with copular constructions, as in (220):

- (220) *Ndiaa tì kúú rà?*  
 Ndiaa=tì kúú=rà  
 what=3man be.CONT=3HUM.M  
 ‘¿Quién es él?’  
 ‘Who is he?’ (Lit.: ‘Which man is he?’)
- (221) \* *Nayòò (tì) kúú rà?*  
 \* Nayòò=(tì) kúú=rà  
 who=3man be.CONT=3HUM.M

When *ndiaa* functions as ‘which’ it lacks the copula and it takes a noun or a pronoun as its complement.

- (222) *Nayóó ñá'a sì kúú libro ka'vó?*  
 Nayóó            ñá'a=sì                    kúú                    libro    ka'v=ó  
 who                thing=POSS                    be.CONT                book    read.CONT=2SG  
 '¿De quién es el libro que estás leyendo?'  
 'Whose book are you reading?' 'Whose [thing] is the book you're reading?'
- (223) *Nayóó tortilla sì kúú yo'o?*  
 Nayóó            tortilla=sì                    kúú                    yo'o  
 who                tortilla=POSS                    be.CONT                this  
 '¿De quién es esta tortilla?'  
 'Whose tortilla is this?'
- (224) *Amá jaa no'ò ve'ó?*  
 Amá    jaa                    no'ò    ve'=ó  
 when    go.back.POT    face    house=2SG  
 '¿Cuándo vas a regresar a casa?'  
 'When are you going back home?'
- (225) *Ndiaa \*(chíñò) sá'ón skuela?*  
 Ndiaa \*(chíñò)                    sá'=ón                    skuela  
 what    work                    go.CONT=2SG    school  
 '¿Porqué vas a la escuela?'  
 'Why do you go to school?'
- (226) *Ndiaa iín ve'è Yele?*  
 Ndiaa    iín                    ve'è<sup>31</sup>    Yele  
 where    exist.CONT                house    Yele  
 '¿Dónde está la casa de Yele?'  
 'Where is Miguel's house?'
- (227) *Ndiaa kivi nó'ò Kalo?*  
 Ndiaa    kivi                    nó'ò                    Kalo  
 what    day                    go.away.COMP                    Charlie  
 '¿Qué día se fue Charlie?'  
 'What day did Charlie leave?'

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<sup>31</sup> 'House' is inalienable in SSM.

- (228) *Ndixaa kóva 'a ná xità?*  
 Ndixaa kóva 'a=ná xità  
 how make.CONT=3HUM.PL.F tortilla  
 '¿Cómo preparan las tortillas?'  
 'How do they make tortillas?'
- (229) *Najaa yusà koni Liya?*  
 Najaa yusà koni Liya  
 how.much dough want.CONT Liya  
 '¿Cuánta masa quiere Liya?'  
 'How much dough does Liya want?'
- (230) *Najaa xoò koni Liya?*  
 Najaa xoò koni Liya  
 how.much chicken want.CONT Liya  
 '¿Cuántos pollos quiere Liya?'/ '¿Cuánto pollo quiere Liya?'  
 'How many chickens does Liya want?'/ 'How much chicken does Liya want?'

### 3.4.8. Negation

There are several kinds of negation used in SSM, the use of which will need further investigation. I report their occurrence and some observations, with particular emphasis on the kind of negation that occurs in comparative constructions.

The following negative particles are used in SSM:

*Koò*: a realis sentential negation used for completive and continuative aspects (NEG.REAL),

*Nì*: a phrasal negation used only with the completive aspect (NEG.PHRASAL),

*Òòn*: an irrealis sentential negation used only with the potential aspect (imperative, future and conditional) (NEG.IRR),

*Òònjiví*: a negation used with focused determiner phrases, which occurs in copular sentences, relative clauses and comparatives (NEG.N).

The realis sentential negation is formed by adding the morpheme *koò* at the beginning of the sentence, but after the wh-phrases and the question particles.

(231) *Kòò nì nàkàtiàì yùù ì.*  
 Kòò            nì-nàkàtià=ì                    yùù=ì  
 NEG.REAL    NEG.PHRASAL-wash=1SG        tooth=1SG  
 ‘No me cepillé mis dientes.’  
 ‘I didn’t brush my teeth.’

(232) *A koò séen Liya xità?*  
 A        koò            séen            Liya    xità  
 Q        NEG.REAL    buy.CONT    Liya    tortilla  
 ‘¿No está comprando tortillas Liya?’  
 ‘Isn’t Liya buying tortillas?’

Thus, the word order in SSM is as in (233).

(233)    Q-Wh.word-NEG-V-Adv-S-O

In rapid speech *koò* can be shortened to *kò*.

(234) *Koò séen kuà’áì kui’i.*  
 Koò            séen            kuà’á=ì        kui’i  
 NEG.REAL    buy.CONT    much=1SG    fruit  
 ‘No estoy comprando mucha fruta.’  
 ‘I am not buying a lot of fruit.’

An additional negative morpheme is used with the completive aspect, and it occurs as a prefix on the verb. I refer to it as a phrasal negation, adding it can cause tone sandhi VP internally.

When *ní* negation is used, *koò* can be omitted, through the tone sandhi stays.

(235) *(Kòò) ní-sèen kuà’áì kui’i.*  
 (Kòò)        ní-sèen                    kuà’á=ì        kui’i  
 NEG.REAL    NEG.PHRASAL-buy.COMP    much=1SG    fruit  
 ‘No compré mucha fruta.’  
 ‘I didn’t buy a lot of fruit.’

(236) *Ndiaa kui’i koò niseen Liya?*  
 Ndiaa    kui’i    koò            nì-seen                    Liya  
 what    fruit    NEG.REAL    NEG.PHRASAL-buy.COMP    Liya  
 ‘¿Qué fruta no compró Liya?’  
 ‘What fruit didn’t Liya buy?’

When the aspect of the verb is potential, a different negative particle is used: *òòn*. The potential form is used with commands (237), when referring to an event occurring in the future (238), and with conditionals.

- (237) a. *Òòn kusi kua'ó kui'i!*  
 Òòn kusi kua'=ó kui'i  
 NEG.IRR eat.POT much=2SG fruit  
 '¡No comas mucha fruta!  
 'Don't eat a lot of fruit!'
- b. \**Koò kusi kua'ó kui'i!*  
 \* Koò kusi kua'=ó kui'i  
 NEG.REAL eat.POT much=2SG fruit
- (238) a. *Òòn kueen kuà'ái kui'i.*  
 Òòn kueen kuà'á=i kui'i  
 NEG.IRR buy.POT much=1SG fruit  
 'No voy a comprar mucha fruta.'  
 'I will not buy a lot of fruit.'
- b. \**Koò kueen kuà'ái kui'i.*  
 \* Koò kueen kuà'á=i kui'i  
 NEG.REAL buy.POT much=1SG fruit

Focused nominal arguments are negated with the negative element *òònjiví*. A sentence which uses *òònjiví* in SSM can be associated with a reverse contrastive negation in English, where oranges and apples are alternative one of the other (McCawley 1991), as in (239).

- (239) Context: someone asks me if I ate the last apples in the kitchen.  
*Sàsì tikua'á, òònjiví manzana.*  
 sàs=i tikua'á , òònjiví manzana  
 eat.COMP=1SG orange NEG.N apple  
 'Comí naranjas, no manzanas.'  
 'I ate oranges, [but] not apples.'

The focus negation is particularly relevant to this dissertation as it is the negation that it is used in comparative constructions, as discussed in chapter 5.

### 3.4.9. Prepositions

Of particular relevance to understanding the comparative construction in SSM is the set of prepositions. In the following section I give a brief presentation of all the possible prepositions available in SSM.

As in other Otomanguean languages, to the best of my current knowledge, all of the prepositions in SSM are derived from body parts.

*Table 10. Prepositions in SSM*

Body part	Preposition	Mixtec word
Belly	Under	Tisi
Insides	Inside/in	Ìni
Face	To/for/on	Nòò
Feet	At the feet of/about	Sa'à
Back	Behind	Sàtà

The following sentences exemplify uses of the prepositions.

- (240) *Chuchi sá'a ita nòò Liya.*  
 Chuchi sá'a ita nòò Liya  
 Chuchi give.CONT flower to Liya  
 'Chuchi dá una flor a Liya.'  
 'Chuchi gives a flower to Liya.'

- (241) *Chuchi naka ìni ve'è.*  
 Chuchi naka ìni ve'è  
 Chuchi stay.CONT in house  
 'Chuchi está en casa.'  
 'Chuchi is at home.'

- (242) *Siyò kano'ó tìsì mesa.*  
 Siyò kano'ó tìsì mesa  
 comal located.CONT below table  
 'El comal está debajo de la mesa.'  
 'The comal is under the table.'
- (243) *Siyò kantu'u sàtà libro.*  
 Siyò kantu'u sàtà libro  
 comal put.CONT behind book  
 'El comal está detrás del libro.'  
 'The comal is behind the book.'
- (244) *Chíjo ndì sa'à mesa.*  
 Chíjo=ndì sa'à mesa  
 cook.CONT=1PL.INC foot table  
 'Estamos cocinando a los pies de la mesa.'  
 'We are cooking at the foot of the table.'

The preposition for 'in' (*ini*) is optional.

- (245) *Chuchi síjìkí vè'e sikuela.*  
 Chuchi síjìkí vè'e sikuela  
 Chuchi play.CONT house school  
 'Chuchi está jugado en la escuela.'  
 'Chuchi is playing in the school.'

### 3.4.10. Adverbs and other modifiers

Adverbs in Mixtec have a different position depending on their meaning. Adverbs of temporal can occur after the subject (246)a, at the beginning of the sentence (246)b, or at the end of the sentence (246)c. They can never occur between the verb and the subject (246)d.

- (246) a. *Sísì jaákuitio mindia.* VSAdvO  
 Sís=i jaákuitio<sup>32</sup> mindia  
 eat.CONT=1SG always nopal  
 ‘Yo siempre como nopales.’  
 ‘I always eat nopales.’
- b. *Jaákuitio sísì mindia.* AdvVSO  
 Jaákuitio sís=i mindia  
 always eat.CONT=1SG nopal  
 ‘Yo siempre como nopales.’  
 ‘I always eat nopales.’
- c. *Sísì mindia jaákuitio.* VSOAdv  
 Sís=i mindia jaákuitio  
 eat.CONT=1SG nopal always  
 ‘Yo siempre como nopales.’  
 ‘I always eat nopales.’
- d. \* *Sísi jaákuitioì mindia.*  
 \* Sísi jaákuitio=i mindia  
 eat.CONT always=1SG nopal VAdvSO

The adverb ‘never’ needs to occur at the beginning of the sentence before the appropriate negation (depending on aspect, see section 3.4.8) and it must co-occur with it.

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<sup>32</sup> The habitual marker and the adverb for ‘always’ form one constituent.

- (247) a. *Chíí koò sí̀sì mindia.* AdvNegVSO  
 Chíí koò sí̀sì mindia  
 never NEG.REAL eat.CONT=1SG nopal  
 'Yo jamás como nopales.'  
 'I never eat nopal.'
- b. \* *Koò sí̀sì mindia chíí.* NegVSOAdv  
 \* Koò sí̀sì mindia chíí  
 NEG.REAL eat.CONT=1SG nopal never
- c. \* *Koò sí̀sì chíí mindia.* NegVSAdvO  
 \* Koò sí̀sì chíí mindia  
 NEG.REAL eat.CONT=1SG never nopal
- d. \* *Koò chíí sí̀sì mindia.* NegAdvVSO  
 \* Koò chíí sí̀sì mindia  
 NEG.REAL never eat.CONT=1SG nopal

Adverbs of time can occur at the beginning of the sentence (248)a, at the end of the sentence (248)d, or preceding an object (248)b or a prepositional phrase (248)c and e.

- (248) a. *Tiaàn kusì mindia sikuela.* AdvVSOPP  
 Tiaàn kus=i mindia sikuela  
 tomorrow eat.POT=1SG nopal school  
 ‘Mañana voy a comer nopales en la escuela.’  
 ‘Tomorrow I will eat nopales at school.’
- b. *Kusì tiaàn mindia sikuela.* VSAdvOPP  
 Kus=i tiaàn mindia sikuela  
 eat.POT=1SG tomorrow nopal school  
 ‘Mañana voy a comer nopales en la escuela.’  
 ‘Tomorrow I will eat nopales at school.’
- c. *Kusì mindia tiaàn sikuela.* VSOAdvPP  
 Kus=i mindia tiaàn sikuela  
 eat.POT=1SG nopal tomorrow school  
 ‘Mañana voy a comer nopales en la escuela.’  
 ‘Tomorrow I will eat nopales at school.’
- d. *Kusì mindia sikuela tiaàn.* VSOPPAAdv  
 Kus=i mindia sikuela tiaàn  
 eat.POT=1SG nopal school tomorrow  
 ‘Mañana voy a comer nopales en la escuela.’  
 ‘Tomorrow I will eat nopales at school.’
- e. \* *Kusi tiaànì mindia sikuela.* VAdvSOPP  
 \* Kusi-tiaàn=i mindia sikuela  
 eat.POT-tomorrow=1SG nopal school

Manner adverbs can only occur between the verb stem and the subject (249)a, but not at the end (249)b, or at the beginning of the sentence (249)c. I analyze these as part of the verb below.

- (249) a. *Síka kue'eó.* VAdvS  
 Síka-kue'e=ó  
 walk.CONT-slow=2SG  
 'Tú estás caminando despacio.'  
 'You are walking slowly.'
- b. \* *Síkó kue'e.* VSAdv  
 \* Sík=ó kue'e  
 walk.CONT= 2SG slow
- c. \* *Kue'e síkó.* AdvVS  
 \* Kue'e sík=ó  
 slow walk.CONT= 2SG

### 3.4.11. *Kuà'á*

An modifier like *kuà'á* ('much/many') is located between the predicate and the subject, as in (250) and (251).

- (250) *Koni ñá kusi kuà'á ñá tako.*  
 Koni=ñá kusi kuà'á=ñá tako  
 want.POT=3HUM.SG.F eat.POT much=3HUM.SG.F taco  
 'Ella quiere comer tacos mucho.'  
 'She wants to eat many tacos.'/'She wants to do a lot of taco eating.'

- (251) *Koni kuà'á ñá kusi ñá tako.*  
 Koni kuà'á=ñá kusi=ñá tako  
 want.POT much=3HUM.SG.F eat.POT=3HUM.SG.F taco  
 'Ella quiere comer tacos mucho.'  
 'She really wants to eat tacos.'

The same element can occur DP internally when it modifies a noun (see also §3.5).

- (252) *Kuà'á nákualí koni jakua'a.*  
 kuà'á nákualí koni jakua'a  
 much girls want.POT study.POT  
 'Muchas chicas quieren estudiar.'  
 'Many girls want to study.'  
 Not: 'Girls want very much to study.'

- (253) *Nákualí koni kuà'á jakua'a.*  
 Nákualí koni kuà'á jakua'a  
 girls want.POT much study.POT  
 'Chicas quieren mucho estudiar.'  
 'Girls want very much to study.'  
 Not: 'Many girls want to study.'

More information on the quantificational adverbs and their use in comparatives will be offered in chapter 5.

### 3.5. The determiner phrase

The determiner phrase in SSM presents the following word order:

- (254) QUANTIFIER/WH-WORD – NUMERAL – NOUN/PRONOUN- ADJ - DEMONSTRATIVE

Adjectives are postnominal but precede the demonstrative. There is no morpheme to indicate that an element (adjective, demonstrative or noun) is plural (except for the adjectives 'small' (*lo'o/kuàlí*) and 'big' (*ká'no/ná'no*), each with its own singular and plural lexeme). (255)-(257) show various determiner phrases with all the possible elements within them and their orders.

- (255) a. *ivi libro kua'á ná'no yo'o*  
 ivi libro kua'á ná'no yo'o  
 two book red big.PL this  
 'estos dos libros grandes y rojos'  
 'these two big red books' Num-Noun-Adj1-Adj2(PL)-Dem
- b. *libro kua'á ká'no yo'o*  
 libro kua'á ká'no yo'o  
 book red big.SG this  
 'este libro grande y rojo'  
 'this big red book' N-Adj1-Adj2(SG)-Dem

(256) a. *ivi libro kua'á sì Chuchi yo'o*  
 ivi libro kua'á sì Chuchi yo'o  
 two book red POSS Chuchi this  
 'estos dos libros rojos de Chuchi'  
 'these two red books of Chuchi' Num-N-Adj-POSS-Dem

b. \* *ivi libro sì Chuchi kua'á yo'o*  
 \* ivi libro sì Chuchi kua'á yo'o  
 two book POSS Chuchi red this

(257) *Ndi'i ònì tikualí kisi rà vikò.*  
 Ndi'i ònì tikualí kisi=rà vikò  
 all three children come.CONT=3HUM.M party  
 'Todos los tres niños vinieron a la fiesta.'  
 'All three children came to the party.' Q-Num-N

In SSM, there is no mass versus count distinction in nouns.

(258) *Juan sasi rà kuaa kopaya.*  
 Juan sasi=rà kuaa kopaya  
 Juan eat2.COMP=3HUM.M many papaya  
 'Juan comió muchas papayas.'/'Juan comió mucha papaya.'  
 'Juan ate many papayas.'/'Juan ate a lot of papaya.'

(259) *Chì'i Juan kuà'á yitò.*  
 Chì'i Juan kuà'á yitò  
 plant.COMP Juan much tree  
 'Juan plantó muchos árboles.'  
 'Juan planted many trees.'

With mass nouns the countable reading is also available by assuming that a container can be silently used with the noun.

(260) *Iin ñalo'o sì'i iin tikuii.*  
 iin ñalo'o sì'i iin tikuii  
 one girl drink.COMP one water  
 'Una chica tomó un [vaso de] agua.'  
 'A girl drunk a [glass of] water.'

A nominal element, whether a pronoun or a classifier, is always obligatory in a DP in SSM.

In (261) the demonstratives require either a noun or a classifier to form a grammatical sentence.

In (262) a nominal element is required even though there is the adjective for ‘fat’ in the DP and in (263)-(264) the same is true even when a numeral is present in the DP, or when a numeral and an adjective co-occur (265).

- (261) a. *Chika'nó tiaá kaá.*  
 Chika'nó      tiaá      kaá  
 fat              man      that  
 ‘Ese hombre está gordo.’  
 ‘That man is fat.’
- b. *Chika'nó tikaá.*  
 Chika'nó      \*(ti-)kaá  
 fat              CFR:3HUM.SG.M-that  
 ‘Él está gordo.’  
 ‘He is fat.’ Lit.:‘That one is fat.’

- (262) *Chuchi ti chikano.*  
 Chuchi              \*(ti)-chikano  
 Chuchi              CFR:3HUM.SG.M-fat  
 ‘Chuchi es el gordo.’  
 ‘Chuchi is the fat one.’

- (263) *Iin tiaà nomí=rà ivì ti tyinano.*  
 Iin    tiaà    nomí=rà                              ivì    \*(ti)-tyinano  
 one    man    hug.COMP=3HUM.M              two    CFR:3HUM.SG.M-fat.PL  
 ‘Un hombre abrazó a dos gordos.’  
 ‘A man hugged two fat ones’ (where ones refers to men)

- (264) \* *Nijòkò nà iin.*  
 \* ni-jòkò=nà                              iin  
 COMP-give.as.a.gift=3HUM.PL.M              one  
 Intended: ‘He gave me one.’

- (265) *Ivì tiñá'no yo'o sísi ti xita.*  
 Ivì    ti-ñá'no                              yo'o    sísi=ti                              xita  
 two    CFR:animal-big.PL              this    eat.CONT=3animal              tortilla  
 ‘Los dos grandes, ellos comen tortillas.’  
 ‘As for these two big ones, they eat tortillas.’ (‘ones’ refers to dogs, based on the context used to elicit this sentence)

There is only one case where a DP does not present a noun or a pronoun in SSM: in partitive constructions.

- (266) a. *Konì ka ì si'in iin rà.*  
 kon=ì                      ga=ì                      si'in    iin=**rà**  
 want.CONT=1SG          speak.CONT=1SG      with    one= 3HUM.M  
 'Quiero hablar con una [persona].'  
 'I want to talk with one [person].'
- b. *Konì ka ì si'in iin nà.*  
 kon=ì                      ga=ì                      si'in    iin=**nà**  
 want.CONT=1SG          speak.CONT=1SG      with    one=3HUM.PL.M  
 'Quiero hablar con uno de ellos.'  
 'I want to talk with one of them.'

We know that (266)b is a partitive because a plural pronoun can occur after the numeral one. It would not be possible for a singular pronoun to follow a plural quantifier or numeral.

- (267) a. *Java nà nindì'vi inì ve'è.*  
 Java=**nà**                      ni-ndì'vi              inì      ve'è  
 some=3HUM.M.PL          COMP-enter          in      house  
 'Algunos entraron en casa.'  
 'Some entered the house.'
- b. \**Java rà nindì'vi inì ve'è.*  
 \*Java=**rà**                      ni-ndì'vi              inì      ve'è  
 some=3HUM.M              COMP-enter          in      house

However, although this same construction is also found in other varieties of Mixtec as Yucuquimi de Ocampo Mixtec (León Vázquez p.c.), the construction per se will need further investigation. One proposal that could be raised is that the pronouns are actually agreement markers; however, that would not be possible, as we would have to justify a whole set of agreement markers that are identical to the pronouns and with the same distribution. Moreover, aside from the lack of economy of that assumption, it would not justify why we would use a plural agreement

marker with the singular form of an adjective, which otherwise could agree in number (this is one of the two adjectives which show morphologically number).

- (268) *Ìin nà ká'nò nindì'vi inì ve'è.*  
 Ìin=nà                      ká'nò    ni-ndì'vi      inì      ve'è  
 one=3HUM.M.PL          big.SG    COMP-enter    in      house  
 'Uno de los grandes entró en casa.'  
 'One of the big people entered the house.'

- (269) *Java nà ná'nò nindì'vi inì ve'è.*  
 Java=nà                      ná'nò    ni-ndì'vi      inì      ve'è  
 some=3HUM.M.PL          big.PL    COMP-enter    in      house  
 'Algunos grandes entraron en casa.'  
 'Some big people entered the house.'

An alternative proposal, which I will assume for the purpose of this dissertation, and that I will look in depth at in the future, is that pronouns in SSM start as indefinite pronouns similarly to the English proform *one*, but with morphologically encoded gender. I argue that clitic pronouns in SSM are indefinite and that they are not referential, but they can become definite and referential (Brame 1976) by movement to the D region, similarly to what has been proposed for demonstratives (Bernstein 1997). In other words, a proposal of this kind has the advantage of not assuming a whole set of different pronouns from the ones offered already, but rather to leave to the syntax the possibility of checking the definiteness feature associated with the pronouns when they are behaving as referential pronouns. Moreover, a proposal of this kind is not new, but it parallels with the same assumptions that we make currently about the syntax of demonstratives, which are generated low in the DP and that in some languages can be raised to spec-DP to become referential and definite (Bernstein 1997). The conclusion that can be drawn is that numerals can select either a NP or a (plural) partitive DP (which is going to be definite); in a partitive construction in SSM I will always assume ellipsis of the noun (cf. Ticio 2005, among others). In

chapter 4 I will talk more about the partitive construction in SSM, as it relates to the use of the disanaphor morpheme *ga*.

There is no overt morphological manner in SSM to signal definiteness/indefiniteness, familiarity. In contrast to Cuevas Mixtec (Cisnero 2019) which uses the classifiers to mark definiteness, in SSM definiteness is not marked in any way. In (270)-(271) I tested to see whether anything could be used within the DP to mark uniqueness, specificity or familiarity; it appears that a bare noun can have a specific, familiar and unique reading. In (270)a I have introduced the rooster and the hen in the discourse, and in (270)b I referred back to the ones introduced, yet no determiner or demonstrative is used.

- (270) a. *Nijòkò nà iin tyelè tí' iin xó'o nòò=i.*  
 Ni=jòkò=nà iin tyelè tí' iin xó'o nòò=i  
 COMP=give.gift=3HUM.PL one rooster and one hen to=1SG  
 'Me regalarón un gallo y una gallina.'  
 'They gave me as a present a rooster and a hen.'
- b. *Niikói xó'o ti' kendoì si'in tyelè.*  
 Ni=ikó=i xó'o ti' kendo=i si'in tyelè  
 COMP=sell=1SG hen and stay.CONT=1SG with rooster  
 'Vendí la gallina y ahora solo tengo el gallo.'  
 'I sold the hen and I have only the rooster left.'

As (271) shows, with nouns that normally would take a definite article because of their unique nature, we still cannot have any marker of definiteness co-occurring with the noun in SSM.

- (271) *Jákua'no javi yùkù.*  
 Jákua'no javi yùkù  
 grow.CONT rain plant  
 'La Lluvia hace crecer las yerbas.'  
 'The rain makes the grass grow.'

'One' is a numeral and does not have to have an indefinite reading, as it can also be used when the noun to which the DP is referring to is definite. The numeral 'one' is optional in (272), and the definiteness or lack of thereof depends on the context, it is not marked morphologically

and the DP can be definite even when is the numeral ‘one’ is occurring in it, thus allowing us to assume a silent D head.

- (272) a. Context (indefinite): out of the blue.  
*Jàkàko ì iin leè.*  
 jà-káko=i (iin) leè  
 make-birth.COMP=1SG one baby  
 ‘Di a luz a un bebé.’  
 ‘I gave birth to a baby.’
- b. Context (definite): there is a baby in the room that we are talking about.  
*Jàkàko ì iin leè.*  
 jà-káko=i (iin) leè  
 make-birth.COMP=1SG one baby  
 ‘Di a luz a un bebé.’  
 ‘I gave birth to the baby.’

### 3.5.1. Quantifiers

Quantifiers in SSM obligatorily occur to the left of the noun or of the pronoun, independently of whether the NP is in the subject or object position.

- (273) *Xiko ñàyiví kua’ à xóo.*  
 Xiko ñàyiví kua’ à xóo  
 sell.COMP people much chicken  
 ‘La gente vende muchos pollos.’  
 ‘The people sell many chickens.’
- (274) *Xiko kua’ à ñàyiví xóo.*  
 Xiko kua’ à ñàyiví xóo  
 sell.COMP much people chicken  
 ‘Mucha gente vende pollos.’  
 ‘Many people sell chickens.’
- (275) *Ko’ oì kueeì cháá ndìxi.*  
 Ko’ o=i kuee=i cháá ndìxi  
 go.POT=1SG buy.POT=1SG little ears.of.corn  
 ‘Voy a comprar algunas mazorcas de maíz.’  
 ‘I am going to buy some ears of corn.’

- (276) *Cháa nakualí jakua'a to'òn ndaví.*  
 Cháa nakuàlí jakua'a to'òn ndaví  
 few children study.CONT Mixtec  
 'Pocos niños estudian Mixteco.'  
 'Few children learn Mixtec.'
- (277) *Java nakualí sǵìkí rà vè'e sikuela.*  
 Java nakuàlí sǵìkí=rà vè'e sikuela  
 half children play.CONT=3HUM.M<sup>33</sup> house school  
 'Algunos niños están jugando en la escuela.'  
 'Some children are playing in the school.'
- (278) *Niii tikuàlí kòó sǵìkí vè'e sikuela.*  
 Ni iin tikuàlí kòó sǵìkí vè'e sikuela  
 NEG.PHRASAL one child NEG.REAL play.CONT house school  
 'Ningún niño está jugado en la escuela.'  
 'No child is playing in the school.'
- (279) *Ndija'a/ndi'i nakualí sǵìkí rà vè'e sikuela.*  
 Ndija'a/ndi'i<sup>34</sup> nakuàlí sǵìkí=rà vè'e sikuela  
 All/all children play.CONT=3HUM.M house school  
 'Todos los niños están jugando en la escuela.'  
 'All the children are playing in the school.'

### 3.5.2. Light-headed relative clauses

Finally, the classifiers can be used as heads of relative causes in Mixtec (Caponigro, Torrence & Cisnero 2013). Relative clauses using the classifier as their head are similar to “light-headed relative clauses” (see Citko 2004 and Mantenuto & Caponigro forthcoming for more information about this kind of construction).

<sup>33</sup> As presented in section 3.4.3 *rà* is used for both singular and plural.

<sup>34</sup> Further work will be necessary to check whether there is a difference between these two lexical items for ‘all’ and if so, what they are.

- (280) *Liya kúú ñákua'an tienda.*  
 Liya kúú ñá-kua'an tienda  
 Liya be.CONT CFR:HUM.SG.F-go.CONT store  
 'Liya es la que va a la tienda.'  
 'Liya is the one who goes to the store.'

When the head of the relative clause is the subject of the relative, a clitic pronoun can optionally occur postverbally in the relative clause (rf. 3.4.1). The same is possible if the head of the relative clause is a full noun (281) and when it is a classifier functioning as a light-head (282).

- (281) *Juan síni rà ñà'a nìnomí (ñá) tilo'ò.*  
 Juan síni=rà [ñà'a nìnomí=(ñá) tilo'ò]  
 Juan know.CONT=3HUM.M woman hug.COMP=3HUM.SG.F child  
 'Juan conoce a la mujer que abrazó al niño.'  
 'Juan knows the woman who hugged the child.'

- (282) *Juan síni rà ñà nìnomí (ñá) tilo'ò.*  
 Juan síni=rà [ñà-nìnom=(ñá) tilo'ò]  
 Juan know.CONT=3HUM.M CFR:HUM.F.SG-hug.COMP=3HUM.SG.F child  
 'Juan conoce a la que abrazó al niño.'  
 'Juan knows the one who hugged the child.'

When the head of the relative clause is the object of the relative clause, the clitic pronoun cannot occur postverbally, similarly to what we see in non-relative clauses when the object is the topic or the focus of the sentence (see 3.4.1). This is true whether the head is a full noun (283), and when it is a classifier functioning as a light-head (284).

- (283) *Juan síni rà ñà'a nìnomí (\*ñá) tilo'ò.*  
 Juan síni=rà [ñà'a nìnomí>(\*ñá) tilo'ò]  
 Juan know.CONT=3HUM.M woman hug.COMP=3HUM.SG.F child  
 'Juan conoce a la mujer que el niño abrazó.'  
 'Juan knows the woman who the child hugged.'

- (284) *Juan síni rà ñà̀nìnomí (\*ñá) tilo 'ò.*  
 Juan síni=rà [ñá-nìnomí>(\*ñá) tilo'ò]  
 Juan know.CONT=3HUM.M CFR:HUM.F.SG-hug.COMP=3HUM.SG.F child  
 'Juan conoce a la que el niño abrazó.'  
 'Juan knows the one who the child hugged.'

### 3.6. Summary

This chapter has presented a description of some basic characteristics in SSM that will aid the reader in understanding the rest of this dissertation. Understanding the composition of the determiner phrase will be particularly helpful for subsequent chapters, especially those parts that discuss the morpheme *ga* as 'other,' as in chapter 4. Moreover, preliminary observations about relative clauses and negative sentences will be helpful for chapter 5 when I will talk about comparatives in SSM.



Krifka (1998) and define an additive particle as a particle (or clitic, as I analyze SSM *ga*) that presupposes that a predication holds for at least one alternative of the expression in focus. In contrast, I will demonstrate that SSM *ga*, like Italian *altro* and English *other/else*, always expresses “distinctness” and that it is a disanaphor morpheme.<sup>36</sup> I will also demonstrate that an additive meaning, although sometimes present with *ga* (and *altro/other*), is derivable from the context (see section 2.2.); no separate additive lexical entry is required. However, the syntactic distribution of *ga* is unlike that of *altro* and *other/else*, due to its clitic status.

This chapter is organized as follows. In section 4.2 I describe the morphosyntactic distribution of *ga*. In section 4.3 I outline the semantic and pragmatic contribution of *ga*. Finally, section 4.4 concludes.

#### 4.2. The syntactic distribution of *ga*

In SSM *ga* is used additively as in (287) and (288), and it also occurs in cases where there is no additive meaning (289).

- (287) *Kási ìn ínka ndìkà.*  
 kási=ìn      ìn=**ga**      ndìkà  
 eat.POT=1SG    one=GA      banana  
 ‘Voy a comer otro plátano.’  
 ‘I am going to eat another banana.’

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<sup>36</sup> As explained in chapter 2, a disanaphor is a deep anaphor (Hankamer & Sag 1976), which must have an antecedent either overtly or in the non-linguistic context to be felicitous (it is important to notice that we are not dealing with syntactic binding).

- (288) *Viti Joséé chí'i tinana jòó ti tiààn chí'i kà rà tata.*  
 Viti Joséé chí'i tinana jòó ti tiààn  
 today Jose sow.COMP tomato skin and tomorrow  
 chí'i=**gà**=rà tata  
 sow.POT=GA=3HUM.M seed  
 'Hoy Jose sembró tomate de cáscara y además mañana va a sembrar semilla.'  
 'Today Jose sowed tomatillo [seeds] and tomorrow he will also sow seeds.'

- (289) *Kóni nòmi ì inka náyivì.*  
 kón=ì nòmi=ì in=**ga** náyivì  
 want.CONT=1SG hug.CONT=1SG one=GA person  
 'Quiero abrazar a la otra persona.'  
 'I want to hug the other person.'

In this chapter, I propose that in the occurrences of the *ga* morpheme in (287)-(289), we are dealing with one morpheme able to express multiple related meanings through different syntactic, semantic and pragmatic properties of its own or of the rest of the utterance (as argued for *other/altro* in chapter 2).

In this section I am going to first offer data supporting its clitic status.

*Ga* is a clitic, phonologically dependent on the word that precedes it (an enclitic) within the phrase that contains it (290), and it cannot be used as an independent word (291).

- (290) a. *Kási Chuchi ìvì ka ndikà.*  
 kási Chuchi [DP ìvì=**ga** ndikà]  
 eat.POT Chuchi two=GA banana  
 'Chuchi va a comer dos plátanos más.'  
 'Chuchi will eat another two bananas.'
- b. *Kási ka Chuchi ndikà.*  
 [VP kási=**ga** [DP Chuchi] [DP ndikà]]  
 eat.POT=GA Chuchi banana  
 'Chuchi va a comer más plátanos.'  
 'Chuchi will eat more bananas.'

- (291) \* *Ka*  
 \* *ga*  
 GA  
 Intended: 'More'

In (291) *ga* cannot be used in isolation, not even to answer a question like that in (292). When asked for an alternative to the answer in (292)A, the answer in (292)A' was offered as the closest possibility to it, no alternative are possible.

(292) Context: in a school cafeteria there are a woman serving food and a child. The woman puts some beans in the child's dish and she asks him...

Q: *A kònó kua'á (o) cháá (kà) nduchì?*  
 A kònó-kua'á (o) cháá(=**gà**) nduchì  
 Q want.CONT-much O? little(=GA) bean  
 '¿Quiere más o menos [de los] frijoles?'  
 'Do you want more or less beans?'

A: \* *Kà*  
 \* *gà*  
 GA  
 Intended: 'more'

A': *Kuà'á (kà) àn.*  
*kuà'á(=**gà**)=àn*  
 much=GA=3THING.OBJ  
 'Más.'  
 'More.'

We can conclude that the problem with *ga* used in isolation is its meaning as well as its clitic form.

#### 4.2.1. The syntactic distribution of *ga* within the DP

When *ga* modifies a DP, it can occur in two positions: either it cliticizes to a quantificational element (a quantifier, a numeral, or a wh-determiner), or it cliticizes to the last element of the DP, with no restrictions on the lexical category that it cliticizes to. The following are examples where *ga* follows a wh-determiner or a numeral or a quantificational expression.

- (293) *Ndiá ka na sèen tikóó si ñá?*  
 ndiá=**ga**=na/náyivì sèen tikóó si=ñá  
 what=GA=3HUM.PL/people buy.COMP tamale POSS=3HUM.SG.F  
 ‘¿Cuáles otras<sup>37</sup> personas compraron sus[sg.f.] tamales?’  
 ‘What other people bought her tamales?’ After a wh-determiner
- (294) *Tasì ivì ka ti.*  
 tasì ivì=**ga**=ti  
 give.POT two=GA=3SPHERIC  
 ‘Dame dos otras [frutas esfericas].’  
 ‘Give me another two [spherical fruits].’ After a numeral
- (295) *Java kà nà sèen tikóó.*  
 java=**gà**=nà sèen tikóó  
 some=GA=3HUM.PL.M buy.COMP tamale  
 ‘Algunos otros compraron tamales.’  
 ‘Some other people bought tamales.’ After a quantifier
- (296) *Kòo kà nà nisèen tikóó.*  
 kòo=**gà**=nà<sup>38</sup> ni-sèen tikóó  
 NEG.REAL=GA=3HUM.PL.M COMP-buy tamale  
 ‘Ninguna otra persona compró los tamales.’  
 ‘No other person bought the tamales.’ After a quantifier
- (297) *Ndi’i ònì kà tikuali kisi rà vikò.*  
 ndi’i ònì=**gà** tikuali kisi=rà vikò  
 all three=GA children come.COMP=3HUM.M party  
 ‘Todos los otros tres niños vinieron a la fiesta.’  
 ‘All the three other children came to the party.’ After quantifier and a numeral

As seen in chapter 3 section 3.4., I argue that SSM is a language that has a silent D head, but that still shows definiteness/indefiniteness, familiarity or uniqueness. Since *ga* is enclitic there always needs to be an element in the DP to which *ga* can cliticize, whether the element is a

<sup>37</sup> The alternation of ‘more’ and ‘other/else’ in the translation depends on the contexts that were used when eliciting a specific sentence. All these sentences would allow both readings (distinct versus additive).

<sup>38</sup> I hope to further explore quantifiers in the future, as the negation in (296) is the sentential one, which I was not expecting.

quantifier or a numeral or a wh-determiner (as we have seen, the demonstratives are always postnominal in SSM). As a reminder, the order of the elements within the determiner phrase is as follows:

(298)      QUANTIFIER/WH-WORD – NUMERAL – NOUN/PRONOUN- ADJ - DEMONSTRATIVE

The only difference between a singular DP with *ga* and one where *ga* does not occur is the presence of the numeral ‘one’ in the former case. Because of the clitic nature of *ga*, when the noun refers to a singular individual, and there is no wh-determiner or quantifier to which *ga* can cliticize, the numeral ‘one’ needs to be obligatorily pronounced, as in (299)-(300).

(299)      *Ndiaa ti kùu inkà tilo’o ii ve’e?*  
ndiaa=ti      kùu      [in=**gà**      tilo’o] ii      ve’e  
what=3man    be.CONT      one=GA      child exist.CONT    house  
‘¿Qué otro niño vive en casa?’  
‘What other child lives at home?’

(300)      *Jàkàko ì ínka leè.*  
jà-káko=ì      ín=**ga**      leè  
make-birth.COMP=1SG      one=GA      baby  
‘Di a luz a otro bebé.’  
‘I gave birth to another baby.’

On the other hand, in (301), *ga* does not occur and the numeral ‘one’ is optional, except when the meaning that we want to reinforce is the singular meaning (as SSM does not present overt number morphology).

(301)      *Jàkàko ì iin leè.*  
jà-káko=ì      (iin) leè  
make-birth.COMP=1SG      one    baby  
‘Di a luz un bebé.’  
‘I gave birth to a baby.’

Although the numeral ‘one’ is used when *ga* needs a default element within the determiner phrase on which to cliticize, such a DP can have a definite reading, not necessarily only an indefinite reading (as reported in chapter 3). In examples (302)-(303) a context is created so that

the only reading possible is definite, while in examples (304)-(305) the only reading possible is indefinite.

- (302) Context (definite): Three people are in the room: Chuchi, me, and another man whose name I don't know. For whatever reason Chuchi and I are not on good terms and I refuse to talk with him. Nevertheless, I need to talk with someone because we are playing some sort of icebreaker game, and we all have to talk with someone...

*Kò konì ka ì si'in Chuchi konì ka ì si'in inka rà.*

Kò	kon=ì	ka=ì	si'in	Chuchi
NEG.REAL	want.CONT=1SG	talk.CONT=1SG	with	Chuchi
kon=ì	ka=ì	si'in	in=ga=rà <sup>39</sup>	
want.CONT=1SG	talk.CONT=1SG	with	one=GA=3HUM.M	

‘No quiero hablar con Chuchi, quiero hablar con el otro.’

‘I don't want to talk with Chuchi, I want to talk with the other one.’

- (303) Context (definite): Three people are in the room: Chuchi, me, and a man whose name I don't know. For whatever reason Chuchi and I are not on good terms and I refuse to talk with him. Nevertheless, I need to talk with someone...

*Kò konì ka ì si'in Chuchi konì ka ì si'in inka nà/tiàa.*

Kò	kon=ì	ka=ì	si'in	Chuchi
NEG.REAL	want.CONT=1SG	talk.CONT=1SG	with	Chuchi
kon=ì	ka=ì	si'in	in=ga={nà /tiàa} <sup>40</sup>	
want.CONT=1SG	talk.CONT=1SG	with	one=GA={3HUM.PL.M/men}	

‘No quiero hablar con Chuchi, quiero hablar con el otro [de ellos / de los hombres].’

‘I don't want to talk with Chuchi, I want to talk with the other one [of them / of the men].’

<sup>39</sup> As I reported in chapter 3, *rà* can be used only for men, not for women.

<sup>40</sup> Notice that while *nà* is a clitic, *tiàa* is a separate word which does not cliticize.

- (304) Context (indefinite): Many men are in the room, I have already talked with Chuchi, and I need to talk with someone else because we are playing some sort of icebreaker where each person needs to talk with as many people as possible...

*Kò konì ka ì si'in Chuchi konì ka ì si'in inka rà.*

Kò	kon=i	ka=i	si'in	Chuchi
NEG.REAL	want.CONT=1SG	talk.CONT =1SG	with	Chuchi
kon=i	ka=i	si'in	in= <b>ga=rà</b>	
want.CONT=1SG	talk.CONT=1SG	with	one=GA=3HUM.M	

‘No quiero hablar con Chuchi, quiero hablar con otro.’

‘I don't want to talk with Chuchi, I want to talk with another one.’

- (305) Context (indefinite): Many people are in the room, and I need to talk with someone else because we are playing some sort of icebreaker game where each person needs to talk with as many people as possible...

*Kò konì ka ì si'in Chuchi konì ka ì si'in inka nà/tiàa.*

Kò	kon=i	ka=i	si'in	Chuchi
NEG.REAL	want.CONT=1SG	talk.CONT =1SG	with	Chuchi
kon=i	ka=i	si'in		
want.CONT=1SG	talk.CONT=1SG	with		

in=**ga={nà/tiàa}**

one=GA={3HUM.PL.M /men}

‘No quiero hablar con Chuchi, quiero hablar con otro [de ellos / de los hombres].’

‘I don't want to talk with Chuchi, I want to talk with another one [of them / of the men].’

In contrast to the preceding examples illustrating the first “slot” within DP where *ga* can appear, the following examples illustrate the second slot where it can appear, namely the end of the DP, independent of the grammatical category of the final element.

- (306) *Nayoo kà sèèn xità si Líyà?*  
 nayoo=**gà**<sup>41</sup> sèèn xità si Líyà?  
 who=GA buy.COMP tortilla POSS Liya  
 ‘Quién más compró las tortillas de Liya?’  
 ‘Who else bought Liya’s tortillas?’ After a wh-word
- (307) *Tasì ìvì pelota kua’a ka.*  
 tasì ìvì pelota kua’a=**ga**  
 give.POT two ball red=GA  
 ‘Dame otras dos pelotas rojas.’  
 ‘Give me two other red balls.’ After an NP-final adjective
- (308) *Tasì ìvì pelota kua’a yika ka.*  
 tasì ìvì pelota kua’a yika=**ga**  
 give.POT two ball red yon<sup>42</sup>=GA  
 ‘Dame aquellas otras dos pelotas rojas.’  
 ‘Give me those two other red balls [over there].’ After an NP-final demonstrative
- (309) *Tasì ìvì pelota ka.*  
 tasì ìvì pelota=**ga**  
 give.POT two ball=GA  
 ‘Dame otras dos pelotas [a mí].’  
 ‘Give [me] another two balls.’ After an NP-final noun

In each of these cases (307)-(309) the element that *ga* follows is always the last element of the DP.

The only element *ga* cannot cliticize onto is a clitic pronoun. This is a feature shared by other Otomanguan languages like Zapotec, where non-pronominal clitics always precede

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<sup>41</sup> The difference between (293) and (306) is that in the former there is a pronoun and in the latter a pronoun is absent. These two wh-expressions behave differently because in (293) *ndiá* is behaving as a wh-determiner and as such it needs a pronoun or noun as its argument, while in (306) *nayoo* is a wh-word and it does not take an argument.

<sup>42</sup> *Yika* 'yon' or 'yonder' is an adnominal demonstrative to refer to something located far away from both the speaker and the listener. I am going to gloss *yika* as 'yon' but I am not going to include it in the translation, other than by adding the adverb '[over there]' and using 'those' in English.

pronominal clitics, never the reverse (Munro p.c.); moreover, in SSM non-pronominal clitics also cannot follow independent pronouns (311).

(310) *Tasì ìvì ti ka.*<sup>43</sup>  
 \* tasì ìvì=ti=**ga**  
 give.POT two=3SPHERIC=GA  
 Intended: ‘I will give (you) another two (balls).’ NOT after a clitic pronoun

(311) \* *Ka’an ì si’in yo’o kà.*  
 \* ka’an=ì si’in yo’o=**gà**  
 talk.POT=1SG with 1SG.IND=GA  
 Intended: ‘I will speak with another me.’ (Context where I am talking to myself from the future.) NOT after an independent pronoun

(312) a. \* *Ka’an ì si’in (ìvì) mee nà kà.*  
 \* ka’an=ì si’in (ìvì) mee=nà=**gà**  
 talk.POT=1SG with two BASE=3HUM.PL.M=GA  
 Intended: ‘I will talk with two others.’  
 NOT after a clitic pronoun following a base

b. \* *Ka’an ì si’in (ìvì) mee kà nà.*  
 \* ka’an=ì si’in (ìvì) mee=**gà**=nà  
 talk.POT=1SG with two BASE=GA=3HUM.PL.M  
 Intended: ‘I will talk with two others.’ NOT after a clitic base

c. *Ka’an ì si’in ìvì kà mee nà.*  
 ka’an=ì si’in ìvì=**gà** mee=nà  
 talk.POT=1SG with two=GA BASE=3HUM.PL.M  
 ‘Yo voy a hablar con dos otras personas.’  
 ‘I will talk with two others.’

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<sup>43</sup> The problem with 0 is the presence of *ga* cliticizing on the clitic pronoun, because the same sentence without *ga* is grammatical.

(i) *Tasì ìvì ti.*  
 tasì ìvì=ti  
 give.POT two=3SPHERIC  
 ‘I will give two (balls).’

Additionally *ga* can never occur DP internally in any position other than the first slot or at the end of the last element in the DP as in (313), which shows that *ga* cannot follow the noun when an adjective is present in the DP.

- (313) *Tasì ivì pelota ka kuà'á.*  
 \* tasì            ivì    pelota=**ga**    kuà'á  
 give.POT        two    ball=GA        red

Thus, at first glance, we could conclude that *ga* is a clitic that can cliticize to any lexical category except pronoun. However, as I show in section 4.2.2.1, the distribution of *ga* is syntactically restricted.

#### 4.2.2.1. A DP-internal analysis

In the previous section I surveyed individual positions of *ga* within the DP. In this section I propose that *ga* attaches to the last element in the DP, and I demonstrate that constituency matters and it blocks some of the DP-internal positions of *ga*.

In (314), *ga* can cliticize at the end of the DP (templatically onto the demonstrative); in (314)a or (314)b, to a numeral but nowhere else.

- (314) a. *Tasì ìvì pelota kuà'á yika ka.*  
 tasì ìvì pelota kuà'á yika=**ga**  
 give.POT two ball red yon=GA Num-N-Adj-Dem-GA
- b. *\*Tasì ìvì pelota kuà'á ka yika.*  
 \*tasì ìvì pelota kuà'á=**ga** yika  
 give.POT two ball red=GA yon  
 NOT Num-N-Adj-GA-Dem
- c. *\*Tasì ìvì pelota ka kuà'á yika.*  
 \*tasì ìvì pelota=**ga** kuà'á yika  
 give.POT two ball=GA red yon  
 NOT Num-N-GA-Adj-Dem
- d. *Tasì ìvì ka pelota kuà'á yika.*  
 tasì ìvì=**ga** pelota kuà'á yika  
 give.POT two=GA ball red yon  
 'Dame aquellas otras dos pelotas rojas.'  
 'Give me those two other red balls [over there].'  
 Num-GA-N-Adj-Dem

Thus, *ga* cannot occur just anywhere in the DP, rather it occurs in only two positions, either at the end of the last overt element in the DP or after a numeral or a quantifier or wh-determiner.

The above observation is true independently of the meaning associated with the sentence. That is, the two positions of *ga* do not correspond to different scopes/different amounts of material being interpreted as properties of the antecedent of the disanaphoric DP: in (30)a and d, only the 'ball' property must be true of the antecedent—the quantity need not be two, the color need not be red, and the location need not be distal, but there is also no requirement for the antecedent to be distinct on any of these properties. Note that this is unlike English, where regardless of other details the antecedent minimally would have to have the property 'red' as well as 'ball'. I have tested the following contexts and both word orders worked equally well for all of them, in all contexts the speaker would ask for two red balls, I would give him something (see contexts in (315)) from a set of colourful balls and he would reply with the sentences in (314)a or (314)d (both equally good in all contexts):

- (315) a. I gave him one red ball.  
 b. I gave him two red balls.  
 c. I gave him two blue balls.  
 d. I gave him a blue ball, a brown ball and a yellow ball.  
 e. I gave him two dark red balls (and in the drawing there of balls there were balls that were different shades of red).

In all the contexts the balls were far from the speaker and close to me; even when we ask for a ball of a distinct color, rather than just a distinct ball, it is not possible to have *ga* in any other position than after a quantifier, a numeral or at the end of the DP.<sup>44</sup> Given the contexts of my example in

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<sup>44</sup> As we have seen for relative clauses and *other/altro* in Italian and English in chapter 2, *ga* can cliticize only to the head of the relative clause (other than the numeral) and not to the whole relative clause. However, similarly to what I have said for Italian and English in chapter 2, we can assume obligatory extraposition. I need to do additional work on relative clauses to better understand them, starting by seeing whether it would make a difference if I better specified the distinction between restrictive versus non-restrictive relative clauses.

- (i) a. *Sìsì iin tako kà kova'a Chuchi.*  
 Sìs=i            iin        tako=**gà**            kova'a            Chuchi  
 eat.COMP=1SG   one        taco=GA                            prepare.COMP   Chuchi  
 'Comí otro taco que preparó Chuchi.'  
 'I ate another taco that Chuchi prepared.'
- b. \**Sìsì iin tako kova'a Chuchi kà.*  
 Sìs=i            iin        tako                            kova'a            Chuchi=**gà**  
 eat.COMP=1SG   one        taco                            prepare.COMP   Chuchi=GA

In the case of possessive phrases, we see that *ga* can cliticize only on the possessum (again, the head).

- (ii) a. *Sìsì ìvì tako kà si rà.*  
 Sìs=i            ìvì        tako=**gà**            si=rà  
 eat.COMP=1SG   two        taco=GA                            POSS=3HUM.M  
 'Comí sus otros dos tacos.'  
 'I ate his other two tacos.'
- b. \**Sìsì ìvì tako si rà kà.*  
 \* Sìs=i            ìvì        tako        si=rà=**gà**  
 eat.COMP=1SG   two        taco        POSS=3HUM.M=GA

(314), we could use the same sentence whether the color of the antecedent ball in the context was the same or a different color from the balls I am asking for. The same facts described for the commands in (314) hold if the same sentences were simple declarative sentences.

Following Cinque (2005, 2010) I propose that DP internally there are two independent parameters that produce the two possible word orders. The first parameter is whether the NP<sup>45</sup> is capable of moving or if it stays in situ. If the NP is capable of moving (movement parameter), then the second parameter that is relevant is whether the NP moves on its own or by pied-piping the immediately dominating phrase each time it moves (pied-piping parameter). For SSM the nodes are the FP just above the FP with the demonstrative in its specifier, and the FP just above the GaP projection.

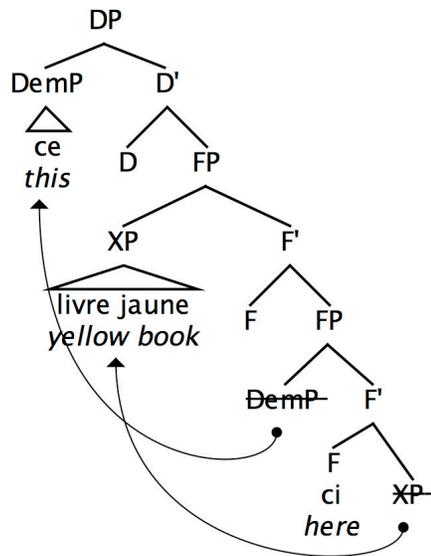
I will now lay out my proposed structure for the DP in SSM. For the position of the demonstrative I assume that it is the same one proposed by Bernstein (1997) and that while in Romance languages the demonstrative has to raise to spec-DP, in SSM it stays in its original position (as it follows since the demonstrative is not associated with definiteness and thus it does not have to check the definiteness feature, which is what motivates the raising to spec-DP in Romance). I follow Bernstein (1997) in assuming that the demonstrative is a phrase in the specifier of a functional phrase with the reinforcer as its head. However, distinctly from French and other languages, SSM does not present raising of the demonstrative phrase to spec-DP and it does not have an adverbial reinforcer. In the case of French the raising of the demonstrative to spec-DP is necessary to satisfy the definiteness associated with a DP containing the demonstrative and not a

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<sup>45</sup> I follow Cinque (2010) in considering that only the noun head is present in NP. However, as I have previously said, I argue that pronouns behave like indefinite nouns in this language, and thus I will assume that they are also generated as Ns in the NP.

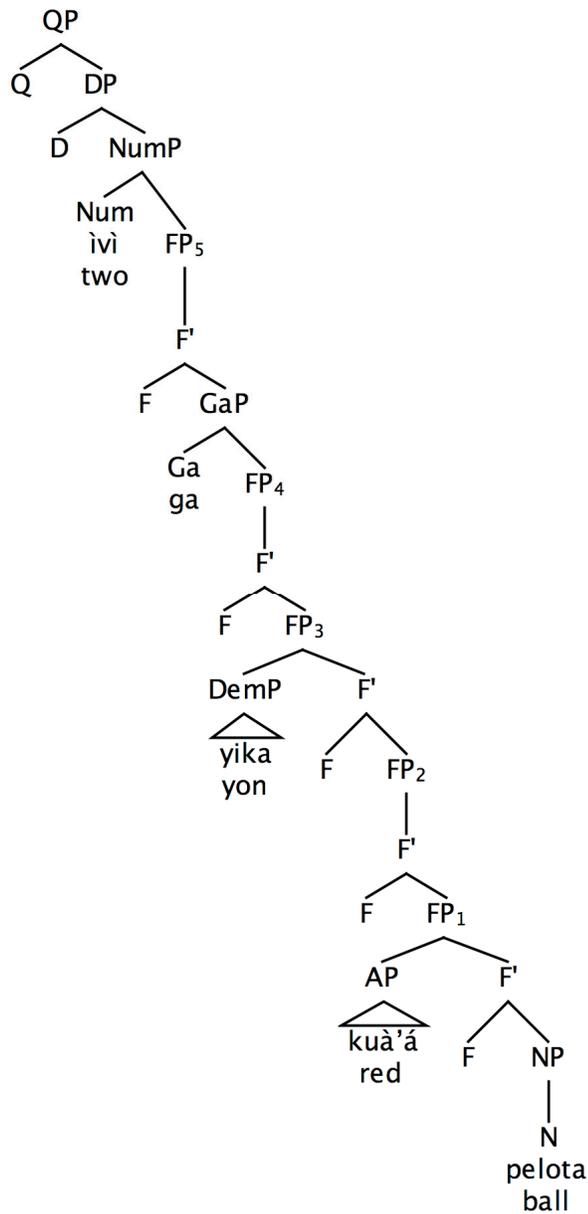
definite article, while the spec-head relationship between the demonstrative phrase's original position and the adverbial head allows deictic feature matching between the demonstrative and the adverbial reinforcer in languages where both of them occur (for more see also Mantenuto 2016).

(316) Bernstein (1997:10)



Moreover, similarly to Cinque (2010), I am not going to talk about DP-internal agreement. Finally, all adjectives in SSM are located after the noun and before the demonstrative at PF. (317) shows the underlying word order before movement occurs in SSM.

(317) D-structure from which both orders are derived



If we assume a Cinque (2010)-style analysis of (314)a-c, I will argue that *ga* is generated as the head of what I call a *ga*-phrase, located very high in the DP, just below the numeral head. This way, *ga* is capable of cliticizing to any element that occurs before it, whether that is a number

or a quantifier or wh-determiner. Meanwhile, comparing the underlying word order in (317) with the surface word order in (318), we know that the SSM noun phrase is capable of raising very high up in the DP projection; the demonstrative is the last element in the DP, while everything else pied-piped into spec-FP<sub>4</sub>, located above FP<sub>3</sub>, where FP<sub>3</sub> has DemP in its specifier.





(320) Context (I had a drawing of this situation that I have used to elicit these sentences):  
 we have colorful balls in between us (brown, red, blue, black...) and there are two  
 different red balls, different in that one is darker and one is lighter. You hand me  
 one of them, but I say ...

a. *Tasì inka tiyako kuà'á.*

Tasì	in= <b>ga</b>	tiyako	kuà'á
give.POT	one=GA	color	red

b. *Tasì in tiyako kuà'á ka.*

Tasì	in	tiyako	kuà'á= <b>ga</b>
give.POT	one	color	red=GA

'Dame el otro color rojo.'

'Give [me] the other red color red.'

As I have reported in chapter 3 section 3.4., it is also possible to have an indefinite pronoun  
 instead of a noun co-occurring with *ga*, as represented in (321)-(322):

(321) *inka rà*

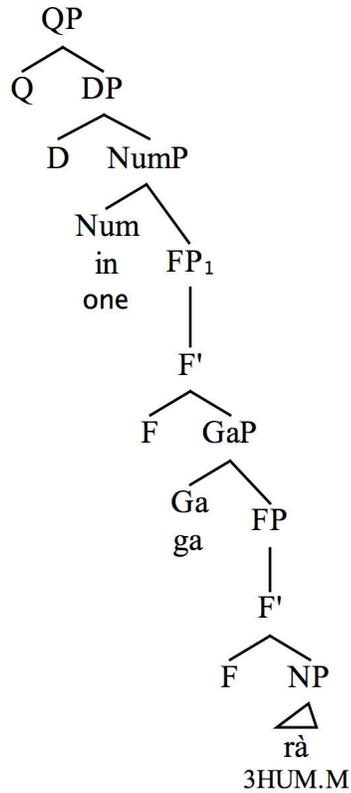
in=ga=rà

one=GA=3HUM.M

'el otro'

'the other one'

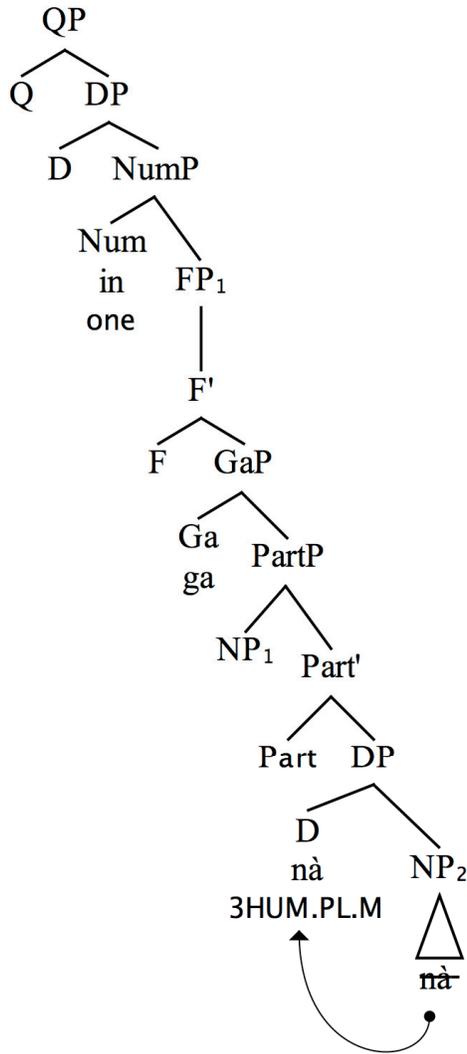
(322)



In chapter 3 section 3.4. we have also seen that *ga* can take a plural pronoun if we are dealing with a partitive construction, as represented in (323)-(324).

- (323) *inka nà*  
in=ga=nà  
one=GA=3HUM.PL.M  
'el otro [de ellos]'  
'the other one [of them]'

(324)

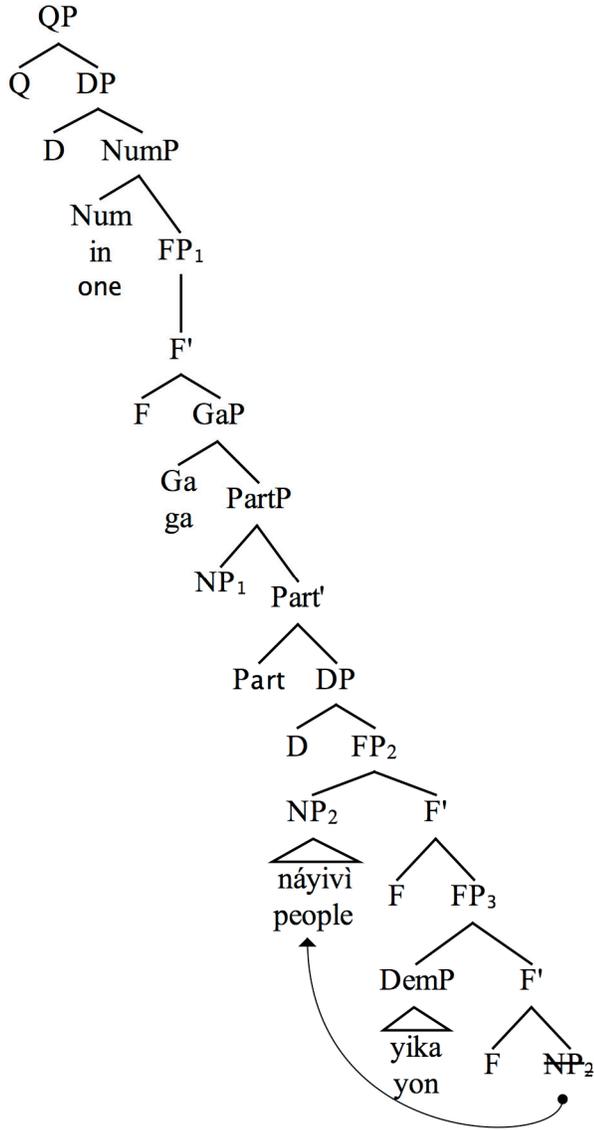


Example (323) is a partitive and I argue that for the pronoun to have a referential reading it will raise to a D position.

Finally, the partitive examples with *ga* could also have a noun instead of the pronoun in NP<sub>2</sub>, as in (325).

- (325) *inka náyivì yika*  
 in=ga náyivì yika  
 one=GA people yon  
 ‘el otro de aquellas personas’  
 ‘the other of those people’

(326)





- (328) a. *Kana kónó kama kà ì.*  
 kana-kónó-kama=**gà**=ì  
 go.COMP-run.COMP-fast=GA=1SG  
 ‘Corrí más rápido.’  
 ‘I ran faster.’ After a manner adverb/VP
- b. \* *Kana kónó kà kama ì.*  
 \* kana-kónó=**gà** kama=ì  
 go.COMP-run.COMP=GA fast =1SG  
NOT between V and manner Adv
- c. \* *Kana kónó kama ì kà.*  
 \* kana-kónó-kama=ì=**gà**  
 go.COMP-run.COMP-fast =1SG=GA NOT after the postverbal subject

The same is true also for another direct modifier of the verb: *kuà’á* (‘much’). Also in this case *ga* can occur only after the modifier *kuà’á* (329)a, but not before it (329)b.

- (329) a. *Kana kónó kuà’á kà ì.*  
 kana-kónó-kuà’á=**gà**=ì  
 go.COMP-run.COMP-much=GA=1SG  
 ‘Corrí mucho más rápido.’  
 ‘I ran much faster.’ After *kuà’á*
- b. \* *Kana kónó kà kuà’á ì.*  
 \* kana-kónó=**gà** kuà’á=ì  
 go.COMP-run.COMP=GA much =1SG NOT between V and *kuà’á*

Although in this section I present an overview of the distribution of *ga* within the DP and within the VP, there is not a uniform syntactic relationship among them.

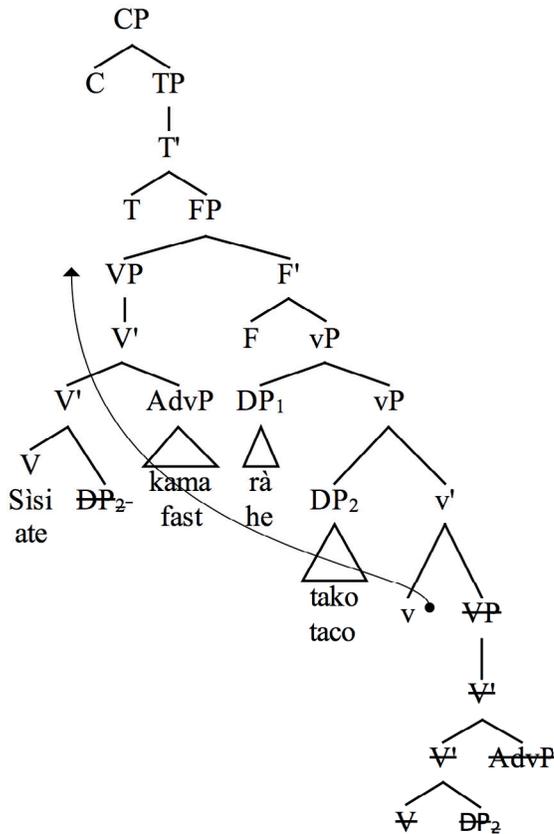
#### 4.2.2.1. VP-internal analysis

In order to derive the VSO word orders in SSM, I assume a variation of an analysis in terms of VP-remnant movement, a topic extensively pursued in the study of other languages (see Clemens & Polinsky 2017, Coon 2010, Chung 2006, Landau 2006, Lee 2006, among others). In (330) there is a transitive verb modified by a manner adverb.

- (330) *Sisi kama rà tako.*  
 Sisi-kama=rà                      tako  
 eat.COMP-fast=3HUM.M            tako  
 ‘Él comió tacos rápido.’  
 ‘He ate tacos quickly.’

I assume that the subject is generated in the specifier of vP and that it gets its nominal case there as well. I then assume that the direct object raises to a lower vP projection, where it receives its accusative case. The remnant VP and all the adverb modifiers that are in the VP (which are in SSM manner and temporal adverbs, cf. chapter 3) will move to a projection just below spec-TP (the T is always empty as the language marks aspect and not tense).

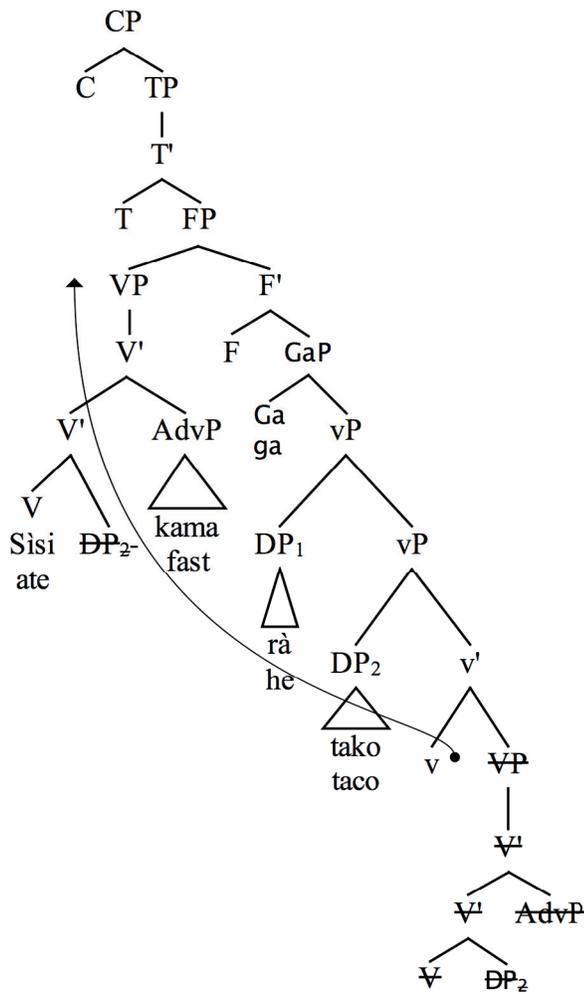
(331)



I assume that the *ga* projection is located above the vP projections, but below the T head, specifically just below the projection the remnant VP moves into. As a consequence *ga* phonologically cliticizes to the last element in the remnant VP, as (331) shows.

- (332) *Sìsi kama ka rà tako.*  
 Sìsi kama=**ga**=rà tako  
 eat.COMP fast=GA=3HUM.M taco  
 ‘Él comió tacos más rápido.’  
 ‘He ate tacos faster.’

(333)



As (333) shows, because the VP has to raise above *ga*, there is only one position where *ga* can cliticize, the last element of the VP projection.

In this section I have presented the syntactic distribution of *ga*; in the next section I will describe its semantics.

### 4.3. The meaning of *ga*

In this section I propose that *ga* is a disanaphor morpheme, similarly to what I argued for *other/else* in English and *altro* in Italian in chapter 2, section 1. A disanaphor is a deep anaphor (Hankamer & Sag 1976), which must have an antecedent either overtly or in the non-linguistic context to be felicitous (it is important to notice, as reported in chapter 2, that we are not dealing with syntactic binding).

#### 4.3.1. DP-internal *ga*

In the following example, Liya does not want to speak with Chuchi, as Chuchi is someone who is tall, but rather she will speak to someone distinct from him. Thus, it means that so far Liya has not spoken to anyone yet, as Chuchi, being tall, would not be a possible person to speak with; the point being that there is no additive reading associated with (334), the predication ‘will talk’ does not hold for any alternatives other than *ñayivi*.

- (334) Context: Chuchi is tall and Liya wants to talk only to short people.  
*Jiko Chuchi. Ka’an Liya si’in ìnkà ñayivi.*  
 jiko Chuchi ka’an Liya si’in in=**gà** ñayivi  
 tall.CONT Chuchi talk.POT Liya with one=GA person  
 ‘Chuchi es alto. Liya hablará con otra persona.’  
 ‘Chuchi is tall, Liya will talk with another person.’

I propose that the following parts of (334) are relevant: the containing DP (the DP containing *ga*) is *ìnkà ñayivi* (‘another person’), which includes the noun that *ga* modifies; the antecedent DP is *Chuchi*; the containing clause (the clause containing the DP with *ga*) is *ka’an Liya si’in ìnkà ñayivi* (‘Liya will talk with another person’); and the antecedent clause is *jiko Chuchi* (‘Chuchi is tall’).

I am going to use "modify" in the way that Barros (2011) does for *else*, as explained in chapter 2 section 1: thus, *ga* adds additional information to the context (the antecedent) which shares a relevant property with the noun that *ga* modifies. In this specific example it is understood from the utterance that we have a set of people, which includes Chuchi, Liya and a third person (*ñayivi* ‘person’); the third person is distinct from Chuchi, and Liya will be talking only to the third person and not to Chuchi. The antecedent clause can also be a postcedent clause (following instead of preceding the containing clause) or can be completely omitted. When it is completely omitted the DP modified by *ga* will look for an antecedent in the context.

I propose that in (334) *ga* triggers an existential presupposition of an antecedent; in other words it means that *ga* triggers a presupposition that there is some contextually salient element *y* in the discourse or in the common knowledge of the speakers. In (334) *y* would be Chuchi, who is present overtly in the discourse. Even if we did not have an overt *y* in the discourse, as in (335), we would still have a *y* in the context that would be presupposed by *ga*.

- (335) *Tasì ivì ka pelota.*  
 tasì            ivì=**ga**            pelota  
 give.POT      two=GA            ball  
 ‘Dame otras dos pelotas.’  
 ‘Give [me] another two balls.’

In the case of (335), the antecedent of *pelota* is some other ball that is present in the context (for information about plurality see chapter 2 section 2.4.1). The element *y* is part of a set, composed of at least two elements, for example *x* and *y*. In (334), *y* is Chuchi, the antecedent DP, while *x* is the DP containing the person (*ñayivi*) who we know (from the context) is short – *x* is the containing DP with the NP modified by *ga*. These elements (*x*, *y*) need both to be of the same type of thing, and they cannot co-refer (distinctness requirement). This means that the person we do not know the name of in (334), *x*, is not Chuchi (hence  $x \neq y$ ). The final property we assume for *ga* is that it

triggers a shared property requirement, which means that  $x$  and  $y$  need to share at least one relevant identifying property (e.g. being human, being animals, being red, etc.) This requirement is what mandates that  $x$  and  $y$  are both people in (334) and that makes a sentence like (336) felicitous if we do not consider 'tamale' to be the antecedent DP. In (336), although there is a possible linguistic antecedent ('tamale'), *ga* picks a discourse antecedent instead (*pelota*), which needs to be in the common knowledge of the speakers.

- (336) *Tasì tikóó ti tasì ìvì pelota=ga.*  
 tasì tikóó ti tasì ìvì pelota=**ga**  
 give.POT tamale and give.POT two ball=**GA**  
 'Dame un tamal y dame otras dos pelotas.'  
 'Give me a tamale and give me two other balls.'

There needs to be at least one relevant characteristic shared between the antecedent ( $y$ ) and the element which *ga* modifies ( $x$ ). So in (336) it seems that 'tamale' cannot be the antecedent of 'ball', thus the speaker will select a distinct ball in the common ground which has not been named overtly in the discourse, but that must exist for the sentence to be felicitous.

A way to summarize the function of *ga* is the following: *ga* modifies an element  $x$ , and it presupposes that there is some contextually salient element  $y$  in the discourse, where  $x \neq y$ .  $x$  and  $y$  are elements of the same set, and as such they share similar characteristics.

Now I explore whether VP-internal *ga* is an additive particle. For the purpose of this dissertation I follow Krifka (1998) and define an additive as an item that presupposes that a predication holds for at least one alternative of the expression in focus (indicated by 'F').

- (337) a. Marco also cooked chicken<sub>F</sub> for dinner.  
 b. 'Marco cooked chicken for dinner (and he cooked something else)'

In (98) the predication 'Marco cooked' holds for at least one alternative element, as is reported in (98)b within the parentheses.

On the other hand, going back to (334), repeated again as (338), it is not true that ‘Liya will talk’ necessarily holds for some alternative element, as it could be that she has not talked to anyone up to this point, in which case *ga* is not an additive particle.

- (338) Context: Chuchi is tall and Liya wants to talk only to short people.  
*Jiko Chuchi. Ka’an Liya si’in ìnkà ñayivi.*  
 jiko Chuchi ka’an Liya si’in in=**gà** ñayivi  
 tall.CONT Chuchi talk.POT Liya with one=GA person  
 ‘Chuchi es alto. Liya hablará con otra persona’  
 ‘Chuchi is tall, Liya will talk with another person.’

We can also see in (339) that *ga* is not an additive particle, as it is not true that there is at least another banana which is green; rather, the antecedent is a ripe banana.

- (339) *Itia ndikà yo’ó. Kaa kuii ìnkà ndikà yika.*  
 itia ndikà yo’ó. Kaa kuii in=**kà** ndigà yika  
 ripe.CONT banana this be.CONT green one=GA banana yon  
 ‘Está madurando este plátano. Está verde aquel otro plátano.’  
 ‘This banana is getting ripe. That other banana [over there] is green.’

Let me offer an additional example to illustrate my definition of *ga*.

- (340) *Sèn ndi’i ka nà tikóó.*  
 sèn ndi’i=**ga**=nà tikóó  
 buy.COMP all=GA=3HUM.PL.M tamale  
 ‘Todos los otros compraron tamales.’  
 ‘All the others bought tamales.’

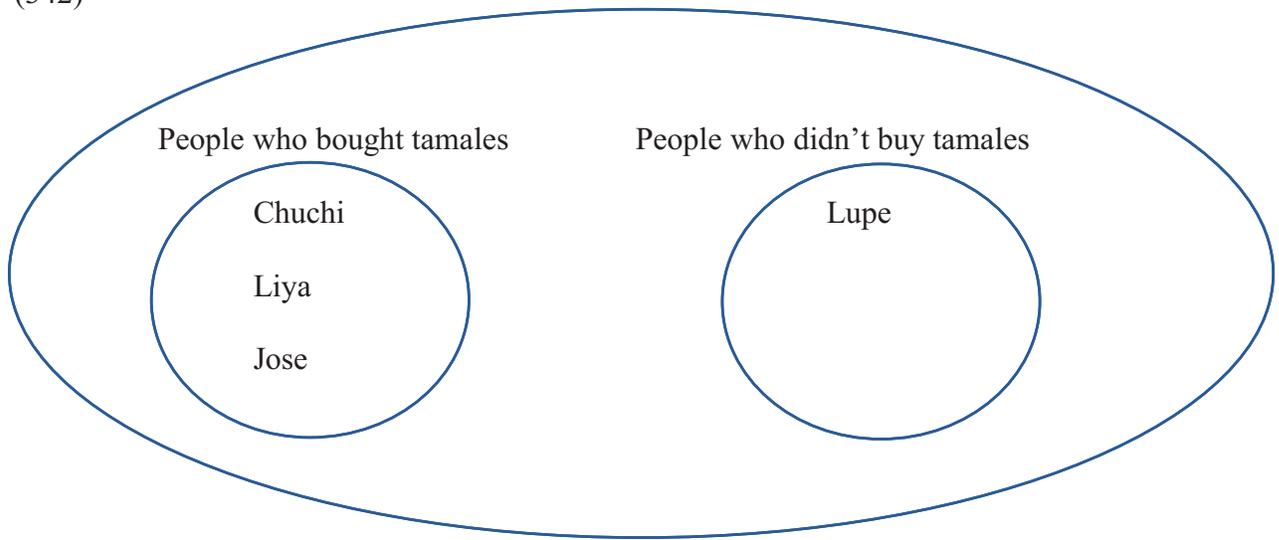
In (340) the set we are referring to includes all the people who bought tamales (the containing DP) and some people that implicitly either did not buy tamales or that bought something different than tamales, such as tacos (the implicit antecedent).

Generally, a quantifier in SSM always takes a pronoun or a noun as its complement.

- (341) *Sèn ndi’i nà tikóó.*  
 sèn ndi’i=nà tikóó  
 buy.COMP all=3HUM.PL.M tamale  
 ‘Todos compraron tamales.’  
 ‘All of them bought tamales.’

When *ga* is included in the sentence, it precedes and modifies the pronoun and it would be appropriate in situations represented by the Venn diagram in (342). I am assuming that the set of people who knew of the tamales are, let's say, four specific individuals (Chuchi, Liya, Jose and Lupe), and that the person who did not buy the tamale is Lupe.

(342)



Summing up, so far I have offered a definition of *ga* as a disanaphor morpheme which triggers an existential presupposition of an antecedent for the DP that *ga* modifies. Moreover, the DP containing *ga* and the antecedent DP need to follow a distinctness requirement. Finally, the antecedent DP needs to share at least one relevant identifying property with the *ga*-modified DP (shared property requirement).

So far, all the examples that I have reported in this section involved only *ga* occurring DP-internally, but *ga* can also occur VP-internally. In the following section I will examine the meaning of VP-internal *ga*.

### 4.3.2. VP-Internal *ga*

In this subsection I am going to explore the meaning associated with *ga* when it occurs at the end of the VP. I claim that VP-internal *ga* shares some characteristics with DP-internal *ga*, but it is actually an additive item.

To the best of my knowledge, VP-internal *ga* requires that the two verbs, the one in the antecedent clause and the one in the containing clause, be the same verb. In (343), there is an event of Lupe sowing seeds that is distinct from the event of Jose sowing seeds. There is a parallel between the two events, such that the structure is the same but the sowing events are distinct.

- (343) *Chì'i Jose tinanan jòó ti chì'i ka Lupe tatà.*  
chì'i            Jose    tinanan            jòó    ti            chì'i=**ga**            Lupe    tatà  
sow.COMP    Jose    tomato            skin    and    sow.COMP=GA    Lupe    seed  
'José sembró tomate de cáscara y además Lupe sembró semilla también.'  
'Jose sowed tomatillo [seeds] and Lupe also sowed seeds.'

In other words, in (343), the event of Jose sowing seeds is distinct from the event of Lupe sowing seeds. In this case *ga* is contributing as a discourse disanaphor scoping over events, asserting that there are two events, each associated with almost the same predicate, but that are distinct from each other. Moreover, although the two verbs need to be the same, they can have different objects, but the objects need to share at least one relevant identifying property; so, in (343) we do not know whether Lupe planted tomato seeds, but we know that she planted some kind of seeds. Finally, the number of seeds sowed by Lupe does not have to be more than the number of seeds sowed by Jose.

The verbs need to be the same, but not identical in form, as they can have different aspects.

- (344) *Viti Joséé chí'i tinana jòó ti tiààn chí'i kà rà tata.*  
 Viti Joséé chí'i tinana jòó ti tiààn  
 today Jose sow.COMP tomatoe skin and tomorrow  
 chí'i=**gà**=rà tata  
 sow.POT=GA=3HUM.M seed  
 'Hoy Jose sembró tomate de cáscara y además mañana va a sembrar semilla también.'  
 'Today Jose sowed tomatillo [seeds] and tomorrow he will also sow seeds.'

The antecedent verb cannot be different from the verb modified by *ga*, or the sentence would be nonsensical. In (345), the event of staying is different from the antecedent event of going. (345)(a), with VP-internal *ga*, is ungrammatical, but as (345)(b) shows, when *ga* occurs within the DP it is ok for the two verbs to be different, as in that case *ga* scopes over individuals and not events. The implication in (345)b is that Liya is also a student.

- (345) a. \**Nisa'a Liya ñanií ti ivì nàjákuà'à kèntoo kà ve'è.*  
 \*nisa'a Liya ñanií ti ivì nàjákuà'à kèntoo=**gà**  
 go.COMP Liya Tonalá and two student stay.COMP=GA  
 ve'è  
 home  
 Intended: ??'Liya went to Tonalá and two students also stayed at home.'
- b. *Nisa'a Liya ñanií ti ivì kà nàjákuà'à kèntoo ve'è.*  
 nisa'a Liya ñanií ti ivì=**gà** nàjákuà'à  
 go.COMP Liya Tonalá and two=GA student  
 kèntoo ve'è  
 stay.COMP home  
 'Liya fue a Tonalá y dos estudiantes más se quedaron en casa.'  
 'Liya went to Tonalá and another two students stayed at home.'

When it comes to the direct objects, the object in the antecedent clause and the object in the containing clause can be different as long as they share one identifying property, as in (343). (346) is ungrammatical because the two objects are completely different.

- (346) \* *Sàsi Liya manzana. Sàsi kà Chuchi ndikà.*  
 \* sàsi Liya manzana sàsi=**gà** Chuchi ndikà  
 eat.COMP Liya apple eat.COMP=GA Chuchi banana  
 Intended: ??‘Liya ate apples. Chuchi also ate bananas.’

If the antecedent event is negated, then the whole sentence is ungrammatical (347)-(348), whether the subjects are different or the same.

- (347) \* *Kòo nìchi’i Jose tinana jòó òòn chì’i ka rà ìvì tata.*  
 \* kòo nì-chi’i Jose tinana jòó òòn  
 NEG.REAL NEG.PHRASAL-sow.COMP Jose tomato skin but  
 chì’i=**ga**=rà ìvì tata  
 sow.COMP=GA=3HUM.M two seed  
 Intended: ??‘Jose didn’t sow tomatillo [seeds], but he also sowed two seeds.’

- (348) \* *Kòo ñá’a nìchi’i Liya jòòn chì’i kà Chuchi ìvì yitò.*  
 \* Kòo ñá’a nì-chi’i Liya jòòn chì’i=**gà**  
 NEG.REAL thing NEG.PHRASAL-sow.COMP Liya but sow.COMP=GA  
 Chuchi ìvì yitò  
 Chuchi two tree  
 Intended: ??‘Liya didn’t sow anything but Chuchi also planted two trees.’

However, if also the second clause is negated then the sentence is grammatical.

- (349) *Kòo nìnàkàtià ì yù’ù ì kònì kòo nìnàkàtià kà ì yù’ù ì viti.*  
 Kòo nì-nàkàtià=ì yù’ù=ì kònì  
 NEG.REAL NEG.PHRASAL-wash.COMP=1SG tooth=1SG yesterday  
 kòo nì-nàkàtià=**gà**=ì yù’ù=ì viti  
 NEG.REAL NEG.PHRASAL-wash.COMP=GA=1SG tooth=1SG today  
 ‘No me cepillé los dientes ayer y no me cepillé los diente hoy tampoco.’  
 ‘I did not brush my teeth yesterday and I also did not brushed my teeth today.’

If the antecedent clause is absent *ga* will pick a predicate antecedent from the discourse that matches the predicate that *ga* modifies. Thus, VP-internal *ga* triggers an existential presupposition that there is another occurrence of the same predicate that has happened earlier, but in this case the number of children does not have to be two.

- (350) *Jàkàko ka ì ìvì leè.*  
 Jàkàko=ga=i                      ìvì      leè  
 give.birth.COMP=GA=1SG      two      baby  
 ‘Además di a luz a dos otros bebés.’  
 ‘I also gave birth to two children.’

In (352), where we have numbers in both direct objects, in SSM the comparative reading is not available, but the additive reading is. In a sentence like (351), the comparative reading is ‘today John interviewed more than three students (e.g. five)’, while the additive reading is ‘today John interviewed additional students (e.g. one or two)’; a sentence like (351) in English is ambiguous between the two readings.

- (351)      Yesterday John interviewed three students. Today he interviewed more (students).  
Greenberg (2010:2)

However, SSM does not share the same ambiguity reported by English. If the comparative reading were available, today Liya would have eaten five tamales, but since it is not, the only reading available is that she has eaten two tamales (the additive reading).

- (352) *Sìsi Liya ònì tikòò kònì. Sìsi kà ñá ìvì viti.*  
 sìsi              Liya    ònì    tikòò    kònì              sìsi=gà=ñá  
 eat.COMP      Liya    three    tamale    yesterday      eat.COMP=GA=3HUM.SG.F  
 ìvì    viti  
 two    today  
 ‘Liya comió tres tamales ayer. Además comió dos hoy también.’  
 ‘Liya ate three tamales yesterday. She also ate two today.’

The same reading is also available in (353), where the reading is not comparative, but rather it seems that the listening action is repeated (the repeated effect comes from the same subject).

- (353) *Sìni jo 'o ì yandavi koni ti sìni jo 'o kà ì yaà viti.*  
 sìni-jo'o=ì yandavi koni ti  
 listen-ear.COMP=1SG Mixtec.song yesterday and  
 sìni-jo'o=**gà**=ì yaà viti  
 listen-ear.COMP=GA=1SG song today  
 'Ayer escuché la canción mixteca y hoy además escuché canciones.'  
 'Yesterday I listened to the Mixtec song<sup>46</sup> and today I also listened to songs.'

We can conclude that *ga* is not a disanaphor morpheme when occurring VP-internally, but rather it seems to function as an additive morpheme.

One question is still unanswered. There seems to be a limitation on the verbs to which *ga* can attach. The verbs 'fall' and 'build', for example, cannot be followed by *ga*. I leave this question unanswered.

- (354) *Kòva 'á Chuchi ve 'è rà. Kòva 'á kà Juan ve 'è rà.*  
 \* kòva'á Chuchi ve'è=rà kòva'á=**gà** Juan  
 build.COMP Chuchi house=3HUM.M build.COMP=GA Juan  
 ve'è=rà  
 house=3HUM.M  
 Intended: 'Chuchi built his house. Juan also built his house.'

- (355) *Nayaa Lupe. Nayaa kà Liya.*  
 \* nayaa Lupe nayaa=**gà** Liya  
 fall.COMP Lupe fall.COMP=GA Liya  
 Intended: 'Lupe fell. Liya also fell.'

#### 4.4. Summary

In this chapter I have presented the data on *ga*, both DP-internally and VP-internally. I define *ga* in the DP as a disanaphor morpheme which modifies an element *x* and presupposes that there is some contextually salient element *y* in the context, where  $x \neq y$ . *x* and *y* are elements of the same set, and as such they share similar characteristics.

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<sup>46</sup> The Mixtec song is a specific Mexican folk song written by the Oaxacan composer José López Alavez, where he describes the feeling of homesickness after he had moved from Oaxaca to Mexico City.

In the VP, the same definition is appropriate, with the exception that instead of talking about individuals, we are talking about events and that the predicates associated with each event need to be the same.

I have also described the syntactic distribution of *ga*, both in the VP and in the DP.

In the next chapter I will talk about the other meaning associated with *ga*, a comparative meaning.

## Chapter 5

### Comparatives in San Sebastián del Monte Mixtec

#### 5.1. Introduction

This chapter presents a detailed description of comparatives in San Sebastián del Monte Mixtec, describing the existence of three comparative structures. Thus, this chapter informs the typology of comparatives, adding to Stassen’s work (1985), which, though widely cited for its Mixtec data (Kennedy 2005, Rett 2020, among others), provides very little descriptive data specific to Mixtec. Here, I show that the conjoined comparative strategy used in Mixtec does not fit any of the current proposals about comparative strategies, thus requiring an extension of our current theory of comparison.

The reason this chapter is included in my dissertation is that the morpheme *ga* that I have analyzed as parallel to English *other*, is also used in comparatives in SSM.<sup>47</sup> In this chapter I will highlight all the functions of *ga* beyond the simple “disanaphor” described in section 4.1.

Macaulay (1996:132) describes the additive particle *ka* in Chalcatongo Mixtec as “a phrasal affix able to attach to a variety of categories and indicating 'more,' 'most,' and 'to excess,' among other meanings.” Among her examples of its use are comparative and superlative sentences.

- (356)      k<sup>w</sup>aʔa uù      ndíká=ka      nuù=rí  
             give    two    banana=ADD    face=1<sup>48</sup>  
             ‘Give me two more bananas.’ Chalcatongo Mixtec (Macaulay: 1996: 132 ex. 162)

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<sup>47</sup>The same morpheme is present in other varieties of Mixtec as well, as described by Bradley & Hollembach (1988, 1990, 1991, 1992), Ferguson de Williams (2007), and Josserand (1982), among others.

<sup>48</sup> As I have done in other chapters I leave the glossing and translations of examples not collected by me as they are in the original texts I have extracted them from. The following are the abbreviations used by Macaulay (1996):

ADD: additive, 1: first person singular, CP: completive, COP: copula, NOM: nominalizer.

(357) ni-žéé=ka=rí takú ásu róʔó  
 CP-eat=ADD=1 taco than you  
 ‘I ate more tacos than you.’ Chalcatongo Mixtec (Macaulay: 1996: 132 ex. 154)

(358) x<sup>w</sup>a kú xa-lúlí=ka  
 Juan COP NOM-small=ADD  
 ‘Juan is the smallest.’ Chalcatongo Mixtec (Macaulay: 1996: 164 ex. 99)

Also SSM can express comparatives with the morpheme *ga* (the equivalent to *ka* in Chalcatongo Mixtec), which is used in all three comparative constructions available in this language.<sup>49</sup>

(359) *Yu’ù jiko kàì òònjiví mee nì.*  
 Yu’ù jiko=**ga**=ì òònjiví mee=nì  
 1SG.IND tall.CONT=GA=1SG NEG.N BASE=2SG.HON  
 ‘Yo soy más alto que usted.’  
 ‘I am taller than you.’ Conjoined comparatives

(360) *Yu’ù jiko kàì nòò mee nì.*  
 Yu’ù jiko=**ga**=ì nòò mee=nì  
 1SG.IND tall.CONT=GA=1SG on BASE=2SG.HON  
 ‘Yo soy más alto que usted.’  
 ‘I am taller than you.’ Locative comparatives

(361) *Yu’ù jiko kàì ja mee nì.*  
 Yu’ù jiko=**ga**=ì ja mee=nì  
 1SG.IND tall.CONT=GA=1SG than BASE=2SG.HON  
 ‘Yo soy más alto que usted.’  
 ‘I am taller than you.’ Particle comparatives

In all three examples, *ga* is cliticized to the predicate (‘tall’) preceding the clitic pronoun.

This chapter is organized as follows: §5.2 presents a brief background on comparatives, §5.3 reports a summary of Stassen’s typology (1985), §5.4 offers empirical descriptions of the three SSM comparative structures, and §5.5 describes the challenge that the SSM conjoined

<sup>49</sup> More information on each one of these constructions will be offered in section 5.4.

comparatives raises for the current theory of conjoined comparatives. §5.6 presents a new analysis and §5.7 concludes.

## **5.2. An introduction to comparatives<sup>50</sup>**

In this section I introduce some of the terminology necessary to look into comparatives.

### **5.2.1. Stassen's definition**

Stassen (1985:24) defines a comparative construction as:

“A construction in a natural language counts as a comparative construction ... if that construction has the semantic function of assigning a graded (i.e. non-identical) position on a predicative scale to two (possibly complex) objects.”

Thus, based on Stassen's definition, in English we consider (362)-(368) as all being comparisons (Bochnak 2013:28).

- (362) Mary is taller than John (is).
- (363) Mary is tall, compared to John.
- (364) Between Mary and John, Mary is the tall one.
- (365) Mary exceeds John in height.
- (366) Mary's height is greater than John's height.
- (367) Mary is tall next to John.
- (368) Mary is tall, but John isn't very tall.

The reason why we consider (362)-(368) to all be examples of comparisons is because all of these sentences imply that Mary is ordered above John on a scale of height. However, English speakers, if asked, would identify only (362) as a comparative. This is because (362) is what Stassen (1985) would refer to as a primary mode of comparison in English, one that it is easily recognizable by

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<sup>50</sup> For a more detailed introduction to comparatives see Bochnak (2013).

non-linguist, while the others are secondary modes of comparison. For example, Kennedy (2007) points out that there are important semantic and pragmatic differences between all these comparatives, the main one being that (362) and (366) use a semantic comparative marker, *-er*, which adds a specific semantic contribution to the construction of the comparative. On the other hand for example, (363) is a pragmatic comparative, since it does not use the comparative marker, but expresses the comparison with the phrase *compared to*.

There is a basic distinction in some languages like English between the unmarked form of an adjective, also known as the “positive” form, and the comparative form of the adjective, which is the positive form plus a comparative morpheme (e.g. *-er* in English, which is overt degree morphology).

(369) Mary is tall.

(370) Mary is taller than John.

The comparative morpheme *-er* gives the ordering relation and it occurring with the gradable adjective, in this case *tall*. A gradable adjective is an adjective which can take different degree of its quality. *Mary* is the target of comparison or comparee, while *John* is the standard of comparison. *Than* is the standard marker, and *than John* is the standard phrase.

The same sentence could have included a measure phrase, which would be a “differential,” telling us the exact amount by which Mary is taller than John.

(371) Mary is 20 centimeters taller than John.

In (371) *20 centimeters* is a differential measure (other kinds of differentials are *much*, *little*, or *a lot* in English). In neither (370) nor (371) do we know the height of either *Mary* or *John* - all we know, thanks to the presence of the comparative morpheme *-er*, is that *Mary*'s height exceeds *John*'s height.

### 5.2.2. Vague versus non-vague adjectives

Gradable adjectives are adjectives that permit degree modification or that can occur in comparative constructions (Morzycki 2016:90). Gradable adjectives can be vague or not, an example of gradable adjective is the adjective *tall*. A possible test to see whether an adjective is gradable is to see whether it can co-occur with a measure phrase like (*two meters*).

(372) Mary is tall. (vague)

(373) Mary is two meters tall. (not vague)

It is hard to say whether (372) is true or false without any information, which is what makes *tall* a vague predicate, whose vagueness is resolved in (373). As Matushansky (2002) has pointed out, *seem* is compatible with vague predications, while *precisely* is not.

(374) Mary seems (\*two meters) tall.

(375) Mary is precisely \*(two meters) tall.

It follows that if we want to test whether a gradable predicate is vague or not, the form of the adjective itself cannot guarantee us that, since many gradable adjectives are vague in their positive form (Barker 2002, Bochnak 2013, Fara 2000, Fine 1975, Kamp 1975, Kennedy 2007b, Kennedy 2011, Klein 1980, van Rooij 2011, among others). It is important to be able to test whether an adjective is gradable or not also because crosslinguistically the same adjectives might not share the same gradable nature. Among other characteristic properties of vagueness, I will talk about having contextual variability.

Contextual variability means that a sentence with a vague predicate can change its truth conditions depending on the context. Suppose that:

(376) Mary is 180 centimeters tall.

Whether *Mary is tall* is true or not depends on the context of the utterance. If *Mary* is in a junior high school class in Italy (376) is obviously true. However, if *Mary* is in the women's basketball team of Syracuse University then the same sentence is false. Thus, some vague predicates are context sensitive and they depend on a comparison class (a set of objects) (Cresswell 1976, Klein 1980, Kennedy & McNally 2005, von Stechow 1984, among others).

Since we have seen that vague gradable predicates depend on the context and on their comparison class, it follows that the positive form of vague predicates can also be used to make comparisons in cases where there is no clear comparative morphology, but the comparison class is given (Kennedy 2007, Kennedy 2011, van Rooij 2011) as in (377) (in contrast to (378) where there is comparative morphology).

(377) Compared to John, Mary is tall.

(378) Mary is taller than John.

### 5.2.3. Implicit versus explicit comparison

The observation of the distinction between these two types of comparatives has led Kennedy (2007) to refer to the comparison technique used in (377) as an implicit comparison and that in (378) as an explicit comparison (borrowing terminology from Sapir 1944).

(379) a. *Implicit Comparison*

Establish an ordering between objects *x* and *y* with respect to gradable property *g* using the positive form by manipulating the context or delineation function in such a way that the positive form is true of *x* and false of *y*.

b. *Explicit Comparison*

Establish an ordering between objects *x* and *y* with respect to gradable property *g* using morphology whose conventional meaning has the consequence that the degree to which *x* is *g* exceeds the degree to which *y* is *g*.

(Kennedy 2007:3)

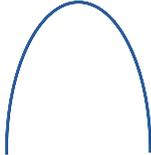
Explicit comparison uses a dedicated morphology to express a comparison relation, as in (378), while implicit comparison uses the positive unmarked form of the predicate to express a comparison, as in (377).

Kennedy (2007) has proposed diagnosing whether we are dealing with explicit or implicit comparatives through three tests: the crisp judgment test, the absolute adjective test and the measure phrase differential test.

**Crisp judgment test:** Implicit comparisons, where the predicate is in its positive form (e.g. *tall* rather than *taller*), are expected to be infelicitous in crisp judgment contexts, as the difference in height is minimal. It is impossible to define one object as tall and the other as not-tall if there is only a small difference between the two heights (380)a, but it is possible when we use a comparative morpheme (380)b.

- (380) Context: Mary is 160 centimeters tall, John is 159 centimeters tall.  
a. # Compared to John, Mary is tall.  
b. Mary is taller than John.

**Absolute-standard predicates test:** Implicit comparisons are expected to be infelicitous with absolute-standard predicates since their standard do not depend on the context; if we say that one bar is bent, for example, it would be false to assert that another one is not, when the context provides that both bars have some degree of “bentness.” On the other hand, explicit comparisons are expected to be felicitous with absolute-standard predicates because their comparative morpheme needs two distinct degrees of “bentness” in the example offered where we are comparing bars that have different degrees of bentness.

- (381) Context: Bar A:  Bar B:   
a. # Compared to bar A, bar B is bent.  
b. Bar B is more bent than bar A.

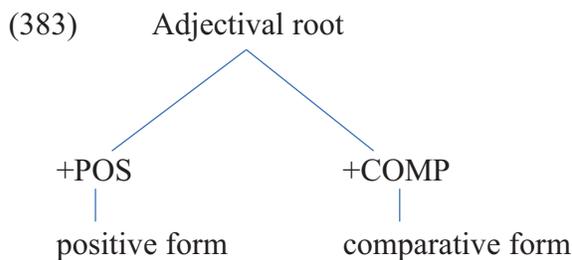
**Measure phrases test:** Measure phrases can override the semantics of the positive form of the predicate. By composing a gradable adjective with a measure phrase we obtain a predicate which is no longer context dependent (Pinkal 1995). Thus, implicit comparison should not allow a non-comparative adjective to combine with a measure phrase, as there would not be any standard of comparison to manipulate, while in the explicit comparison differential measure phrases are allowed.

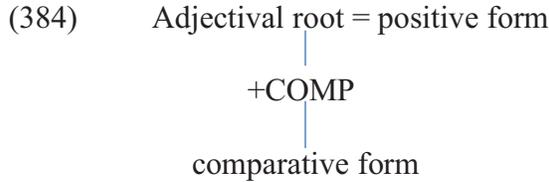
- (382) a. # Compared to John, Mary is 10 centimeters tall.  
 b. Mary is 10 centimeters taller than John.

I will return to Kennedy's tests for SSM comparatives in section 5.5 below.

#### 5.2.4. Analysis

The two semantic analysis for gradable adjectives are a decompositional analysis and a non-decompositional analysis (Bochnak 2013). The analysis where we compare degrees is also known as decompositional analysis, and it assumes that the underlying form of the positive and of the comparative predicate is the same (385). On the other hand, the analysis where we compare individuals is also known as non-decompositional analysis: in this analysis the positive form of the gradable predicate is maintained, and then the comparative is derived from it (384) (the following schemes are taken from Bochnak (2013: 38) and inspired by Francez & Koontz-Garboden (2012)).





I will follow the decompositional analysis and leave any possible debate for future work.

The way the decompositional analysis works is that the gradable adjective *tall* in this case expresses a relationship between an individual and a degree  $d$  on a scale, where the property of the individual in question is at least equal to a degree  $d$ , if not greater.

$$(385) \quad \llbracket tall \rrbracket = \lambda d. \lambda x. HEIGHT(x) \geq d$$

This means that a gradable adjective denotes a function from degree to functions  $f$  from individuals to truth values, such that for any degree  $d$ ,  $f(x)$  is true if and only if  $x$ 's degree on the scale encoded by the adjective is greater than or equal to  $d$ .

Kennedy and McNally (2005) place a restriction  $R$  over  $d$ , where  $d$  can be greater than or equal to the degree derived from the standard phrase, or indicated by the measure phrase, degree adverbs, equatives and superlatives.

$$(386) \quad \llbracket Deg \rrbracket = \lambda G \lambda x. \exists d [R(d) \wedge G(d)(x)] \quad (\text{Kennedy \& McNally 2005:367})$$

When we combine this property with the meaning of the gradable predicate we obtain the property of an individual  $x$ , such that if it is true that there exists a degree of height that exceeds a certain standard  $d$  derived from the standard phrase, and  $x$ 's height is at least as great as that degree.

$$(387) \quad \llbracket -er/more than dc \rrbracket = \lambda G \lambda x. \exists d [d > dc \wedge G(d)(x)]$$

$$(388) \quad \llbracket taller than dc \rrbracket = \llbracket -er/more than dc \rrbracket (\llbracket tall \rrbracket) = \lambda x. \exists d [d > dc \wedge height(x) \geq d]$$

I will go into the decompositional analysis in more depth in §5.6, slightly modifying it to account for the conjoined comparatives in SSM. However, in the following two sections I first

offer a summary of Stassen’s comparative typology and then a detailed empirical description of comparatives in SSM.

### 5.3. Stassen’s comparative typology

Stassen (1985)<sup>51</sup> groups comparatives in five main categories, depending on their structure: separative comparatives, allative comparatives, locative comparatives, exceed comparatives, and conjoined comparatives. I will present an overview of each category before showing which ones are used in SSM in §5.4.

Separative comparatives are comparatives where the “NP-comparison is, in this case, expressed in one single surface clause. In this case the comparee NP can, in principle, have any grammatical function. In contrast the standard NP is invariably encoded as a constituent part of an adverbial phrase with a (spatial or non-spatial) separative [‘from’] interpretation” (Stassen 1985: 39).

- |       |   |          |              |      |                             |
|-------|---|----------|--------------|------|-----------------------------|
| (389) | Sadom-ete                                 | hati     | mananga-i    |      |                             |
|       | horse-from                                | elephant | big-PRES.3SG |      |                             |
|       | ‘The elephant is bigger than the horse.’  |          |              |      | Mundari (Stassen, 1985:39)  |
|       |   |          |              |      |                             |
| (390) | Nihon-go                                  | wa       | doits-go     | yori | muzukashi                   |
|       | Japanese                                  | TOP      | German       | from | difficult                   |
|       | ‘Japanese is more difficult than German.’ |          |              |      | Japanese (Stassen, 1985:39) |

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<sup>51</sup> Stassen (1985) is still widely cited by linguists working on comparatives. I report his data as others have done, in order to offer a background to the reader about the typology of comparatives. The reader might notice that in many cases the sentences are not all translated as comparative sentences in English, but nevertheless are assumed to be comparatives since they were reported as such in the grammars and books consulted by Stassen. I report the data as it is, including the debatable translations in English in some cases, and I refer the reader to Stassen (1985) for more information on the typology.

Allative comparatives can be considered mirror images of separative comparatives; the NP comparison is expressed in one single clause, and the standard NP is encoded as a constituent part of a goal-phrase.

(391) Sapuk ol-kondi to l-kibulekeny  
 is-big the-deer to the-waterbuck  
 ‘The deer is bigger than the waterbuck.’ Maasai (Stassen 1985:41)

(392) Jazo bras-ox wid-on  
 he big-PRT for-me  
 ‘He is bigger than me.’ Breton (Stassen 1985:41)

Locative comparatives have one single clause, similar to allative and separative comparatives. However, “the standard NP is encoded as a constituent of an adverbial phrase which is marked by an element that indicates spatial or non-spatial contact” (Stassen 1985: 41).

(393) Gamga-qla’ul-ik qetvu-ci-um  
 all-men-on strong-more-1SG  
 ‘I am stronger than all men.’ Chuckchee (Stassen 1985:41)

(394) Ragas-mo in luwa ti-hek  
 surely-you more man on-me  
 ‘You are more of a man than me.’ Salinan (Stassen 1985:42)

Exceed comparatives are comparatives which use a verb meaning ‘to exceed’ or ‘to surpass’ to impose a strict ordering. We have seen this behavior earlier with English (repeated below in (395)) and now in Yoruba (396).

(395) Mary exceeds John in height.

(396) O tobi ju u.  
 he big exceed him  
 ‘He is bigger than him.’ Yoruba (Stassen, 1985: 43)

Conjoined comparatives are comparatives which use two conjoined clauses to associate the target of comparison and the standard of comparison. The two clauses can be prosodically separated and thus are being reported orthographically with a comma in between, or they can be

coordinated by an conjunction (e.g. ‘and’) in such a way that the gradation between the two objects can be inferred from the order. In the second conjunct they can either use an antonym of the predicate used in the first conjunct (397)-(398) as in Samoan, or they can use negation as in Motu (399).<sup>52</sup>

(397) Ua **lelei** isi tama , ua **leaga** isi tama.  
 is good some boys is bad some boys  
 ‘Some boys are good, some boys are bad.’ Samoan (Stassen, 1985: 187)

(398) Ua **loa** lenei va’a , ua **puupuu** lena.  
 Is long this boat is short that  
 ‘This boat is longer than that boat.’ Samoan (Stassen, 1985: 187)

(399) Ina na namo herea , una na **dia** namo  
 this is good more that is not good  
 ‘This is better than that.’ Motu (Stassen 1985: 186)

Stassen (1985) then covers two additional types of comparatives, namely particle comparatives and mixed comparatives.

Particle comparatives do not have the structural form of a coordination of clauses; a characteristic of this construction is the presence of a comparative particle which accompanies the standard NP.

(400) Mary is prettier than Lisa.

(401) Enak daging karo nvak.  
 is-good meat than fish  
 ‘Meat is better than fish.’ Javanese (Stassen 1985:47)

(402) Lehibe noho ny zana-ny Rabe.  
 tall than the son-his Rabe  
 ‘Rabe is taller than his son.’ Malagasy (Stassen 1985:26)

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<sup>52</sup> Although specifics about prosodic boundaries are not offered by Stassen (1985), the clause boundary seem to match the position of the comma within the sentence.



- (404) Luu caa<sup>53</sup> nuu yaha , nasuu nuu ndjinu.  
 good very people this not people Tlaxiaco  
 ‘This people is better than the Tlaxiaco people.’ Atatlahuca Mixtec  
 (Stassen, 1985: 186)

The Atatlahuca Mixtec data is similar to that from Yucuquimi de Ocampo Mixtec (León Vázquez p.c.), where the *ga/ka(a)* morpheme can also occur in both conjuncts, most specifically in this variety the *ga* in the second conjunct is obligatory.

- (405) *Nàsaxí yù'ù kwà' à cháá kàà dīta dūú kàà yó'ó.*  
 nà-saxí yù'ù kwà' à cháá=kàà dīta dūú=kàà  
 COMP-eat 1SG.IND much few=GA tortilla NEG=GA  
 yó'ó  
 2SG.IND  
 ‘Comí muchas tortillas más que tú.’  
 ‘I ate many more tortillas than you.’

---

<sup>53</sup> Although Stassen (1985) has glossed the morpheme *caa* as ‘very’, Alexander has glossed *caa* as ‘parece’ which means ‘seems’ rather than ‘very’. The English glosses and the English translations in (i) and (ii) are mine.

- (i) Luu caa nuu yaha , nasuu nuu ndjinu.  
 bonito parece pueblo este no pueblo Tlaxiaco  
 good seem town this not town Tlaxiaco  
 ‘Este pueblo es más bonito que Tlaxiaco.’  
 ‘This town is better than [the town of] Tlaxiaco.’ Atatlahuca Mixtec (Alexander, 1980: 31)

However, in other parts of the same grammar Alexander has comparatives formed by *ga* and the negation *nasuu* (i) is the only token of *nasuu* in a comparative without *ga*.

- (ii) Sájniñu ga tēe yúcuan nasūau gá sãñá  
 trabaja más hombre aquel no más yo  
 work more man yonder not more I  
 ‘Aquel hombre trabaja más que yo.’  
 ‘That man works more than me.’ Atatlahuca Mixtec (Alexander, 1980: 93)

I included this commentary for clarity’s sake, and I hope to pursue it further in the future. As the data was mislabeled it appears that Atatlahuca Mixtec’s conjoined comparatives can share more similarities to SSM’s comparatives, as they all can include the *ga/ka(a)* morpheme.



The *ga* morpheme can combine with a variety of items, such as a verbal predicate (410), with an adverb (411), an adjective (412)-(413) or a numeral (414)-(415), depending on the element that we are comparing.

- (410) *Ñakaa sàsi ka ña kopaya òònjìví me ní.*  
 Ña-kaa                      **sàsi=ga=ña**                      kopaya  
 CFR:HUM.SG.F-that      eat.COMP=GA=3HUM.SG.F      papaya  
 òònjìví              me=ní  
 NEG.N              BASE=2SG.HON  
 ‘Ella comió más papayas que usted.’  
 ‘She ate more papayas<sup>55</sup> than you.’

- (411) *Chuchi kana kono kama kà rà òònjìví Liya.*  
 Chuchi              kana              kono              **kama=gà=rà**              òònjìví  
 Chuchi              go.CONT              run.CONT              fast=GA=3HUM.M              NEG.N  
 Liya  
 Liya  
 ‘Chuchi corre más rápido que Liya.’  
 ‘Chuchi runs faster than Liya.’

The comparative morpheme follows a predicative adjective (412), just as that it follows verbal predicates (409)-(410). The same is also true with attributive adjectives, where the comparative morpheme follows the adjective within the DP (413).

- (412) *Yu’ù jiko kài òònjìví mee nì.*  
 Yu’ù              **jiko=ga=i**              òònjìví              mee=nì  
 1SG.IND              tall.CONT=GA=1SG      NEG.N              BASE=2SG.HON  
 ‘Yo soy más alto que usted.’  
 ‘I am taller than you.’

---

<sup>55</sup> As reported in chapter 3, SSM does not distinguish between mass nouns and count nouns.

- (i) *Yu’ù kuà’á kopayá sàsì.*  
 Yu’ù              kuà’á      kopayá      sàs=i  
 1SG.IND              much      papaya      eat.COMP=1SG  
 ‘I ate many papayas./I ate a lot of papaya.’

- (413) *Sàsì ndika china'no ka òònjìvì mee ní.*  
 Sàs=ì ndika **china'no=ga** òònjìvì mee=ní  
 eat.COMP=1SG banana big.PL=GA NEG.N BASE=2SG.HON  
 'Yo comí plátanos más grandes que los tuyos.'  
 'I ate bigger bananas than you.'

Finally, whenever we compare differential measures, the morpheme *ga* occurs on the numeral

(414)a-(415)a, on the predicate (414)b-(415)b or on the measure phrase (414)c.

- (414) a. *Jikó Liya iin kà metro òònjìvì Lupe.*  
 Jikó Liya **iin=kà** **metro** òònjìvì Lupe  
 tall.CONT Liya one=GA meter NEG.N Lupe  
 'Liya mide un metro más que Lupe.'  
 'Liya is one meter taller than Lupe.'
- b. *Jikó kà Liya iin metro òònjìvì Lupe.*  
**Jikó=kà** Liya **iin** **metro** òònjìvì Lupe  
 tall.CONT=GA Liya one meter NEG.N Lupe  
 'Liya mide un metro más que Lupe.'  
 'Liya is one meter taller than Lupe.'
- c. *Jikó Liya iin metro kà òònjìvì Lupe.*  
 Jikó Liya **iin** **metro=kà** òònjìvì Lupe  
 tall.CONT Liya one meter=GA NEG.N Lupe  
 'Liya mide un metro más que Lupe.'  
 'Liya is one meter taller than Lupe.'

- (415) a. *Tikaa sisi rà òòn ka tako òònjìví ñakaa.*  
 Ti-kaa                      sisi=rà                      **òòn=ga**                      tako  
 CFR:HUM.SG.M-that      eat.COMP=3HUM.M      five=GA                      taco  
 òònjìví                      ña-kaa  
 NEG.N                      CFR:HUM.SG.F-that  
 ‘Ese comió cinco tacos más que esa.’  
 ‘That one [masculine] ate five tacos more than that one [feminine] did.’
- b. *Tikaa sisi ka rà òòn tako òònjìví ñakaa.*  
 Ti-kaa                      **sìsi=ga=rà**                      **òòn**      tako  
 CFR:HUM.SG.M-that      eat.COMP=GA=3HUM.M      five      taco  
 òònjìví                      ña-kaa  
 NEG.N                      CFR:HUM.SG.F-that  
 ‘El comió cinco tacos más que ella.’  
 ‘He ate five tacos more than she did.’
- c. \* *Tikaa sisi rà òòn tako ka òònjìví ñakaa.*  
 \* Ti-kaa                      sisi=rà                      **òòn**      tako=**ga**  
 CFR:HUM.SG.M-that      eat.COMP=3HUM.M      five      taco=GA  
 òònjìví                      ña-kaa  
 NEG.N                      CFR:HUM.SG.F-that

Note that when we are dealing with a numeral or a measure phrase the meaning does not change whether *ga* attaches to the numeral, the whole measure phrase<sup>56</sup> or the verb. However, it is not possible for *ga* to attach to the last element of the DP in comparatives, as the ungrammaticality of (415)c shows, and contrary to what we have seen when *ga* functions as a disanaphor morpheme in chapter 4.

The morpheme *ga* forms a constituent with the gradable adjective (*jiko=ga*).

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<sup>56</sup> A similar case in English showing the equivalency in meaning of different positions of the comparative marker in the measure phrase would be the following (Carson Schütze p.c.).

- (i) She ran one mile more than he did.
- (ii) She ran one more mile than he did.

(416) I am **taller** than you.

(417) *Yu'ù jiko kai òònjìví mee ní.*

Yu'ù	<b>[[jiko=ga]=ì</b>	òònjìví	mee=ní
1SG.IND	tall.CONT=GA=1SG	NEG.N	BASE=2SG.HON

‘Yo soy más alto que usted.’  
‘I am taller than you.’

Alternatively, in SSM the morpheme *ga* can also compose with the gradable adverb *kuà'á* (418).

(418) *Yu'ù jiko kuà'á kai òònjìví mee ní.*

Yu'ù	<b>[[jiko</b>	<b>[kuà'á=ga]=ì</b>	òònjìví	mee=ní
1SG.IND	tall.CONT	much=GA=1SG	NEG.N	BASE=2SG.HON

‘Yo soy mucho más alto que tú.’  
‘I am much taller than you.’

*Kuà'á* can be used with *ga* only when there is a big difference in degree between the two individuals and not in cases of crisp judgment; thus *kuà'á ga* cannot be considered to form together the comparative marker similar to what Galant (1998) has previously said about some uses of English *more* (considered to be *much+er*).<sup>57</sup> There is an obvious difference in meaning between when we use *ga* alone versus when we use *kuà'á ga*, as (119) and (420) show with the crisp judgment test (Kennedy 2007).

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<sup>57</sup> Galant (1998) has proposed that the comparative morpheme *-er* surfaces synthetically in the word *more* in amount comparatives and verbal extent comparisons.

- (i) a. Rodrigo bought more books than Felipe. [where more=ER.MUCH.pl]
- b. Rodrigo spent more money than I did. [where more=ER.MUCH] Galant (1998:65)
- (ii) a. UCLA students study more than usual right before finals. [where more=ER.MUCH]
- b. I call Bill more than I call anyone else I know. [where more=ER.MUCH] Galant (1998:65)

However, the same proposal is not extendable to SSM, as the data in (119) and (420) demonstrate.

(419) Context – No Crisp judgment: I am 180 centimeters tall and you are 150 centimeters tall.

a. *Yu'ù jiko kuà'á kài ja mee ní.*

Yu'ù            jiko            **kuà'á=ga=i**            ja  
1SG.IND        tall.CONT        much=GA=1SG        than

mee=ní.

BASE=2SG.HON

'Yo soy mucho más alto que usted.'

'I am much taller than you.'

b. *Yu'ù jiko kài ja mee nì.*

Yu'ù            jiko=**ga=i**            ja        mee=nì  
1SG.IND        tall.CONT=GA=1SG        than    BASE=2SG.HON

'Yo soy más alto que usted.'

'I am taller than you.'

(420) Context – Crisp judgment: I am 180 centimeters tall and you are 179 centimeters tall.

a. \* *Yu'ù jiko kuà'á kài ja mee ní.*

* Yu'ù	jiko	<b>kuà'á=ga=i</b>	ja	mee=ní
1SG.IND	tall.CONT	much=GA=1SG	than	BASE=2SG.HON

b. *Yu'ù jiko kài ja mee nì.*

Yu'ù	jiko= <b>ga=i</b>	ja	mee=nì
1SG.IND	tall.CONT=GA=1SG	than	BASE=2SG.HON

'Yo soy más alto que usted.'

'I am taller than you.'

0 and (420) show that the presence or absence of *kuà'á* has an effect only on whether the difference in the height amount is substantially relevant or not; *kuà'á* does not have to be present to felicitously form a comparative. Thus, we can conclude that *ga* on its own is the comparative morpheme, while *kuà'á* functions as a degree morpheme which amplifies the degree expressed by the gradable predicate (*jiko* 'tall') when indicating the difference in degrees of height between the target of comparison ('I') and the standard of comparison ('you').

*Ga* forms a constituent with *kuà'á* in the verb phrase (*kuà'á ga*) in (421)a and this constituent can also be fronted before the verb (421)b.

- (421) a. *Yu'ù jiko kuà'á kai òònjìví mee ní.*  
 Yu'ù            [[**jiko**            [**kuà'á=ga**]]=ì            òònjìví  
 1SG.IND            tall.CONT            much=GA=1SG            NEG.N  
 mee=ní  
 BASE=2SG.HON  
 'Yo soy mucho más alto que usted.'  
 'I am much taller than you.'
- b. *Yu'ù kuà'á ka jikoì òònjìví mee ní.*  
 Yu'ù            [**kuà'á=ga**]    [jiko ]            =ì            òònjìví  
 1SG.IND            much=GA            tall.CONT            =1SG    NEG.N  
 mee=ní  
 BASE=2SG.HON  
 'Yo soy mucho más alto que usted.'  
 'I am very much taller than you.'<sup>58</sup>

*Kuà'á* can normally move to the left of the verb. On the other hand, *ga* cannot move on its own to the left of the verb because of its clitic status. When *kuà'á* precedes the predicate, as in (421), it has a more emphatic meaning.

- (422) *Yu'ù kuà'á jikoì.*  
 Yu'ù            **kuà'á** jiko            t            ì  
 1SG.IND            much tall.CONT            1SG  
 'Yo soy MUY alto.'  
 'I am VERY tall.'

However, when *kuà'á* and *ga* co-occur, *kuà'á* cannot move on its own to the left of the verb without *ga*.

- (423) \* *Yu'ù kuà'á jiko kai òònjìví mee ní.*  
 \* Yu'ù            **kuà'á** jiko=**ga**=ì            òònjìví            mee=ní  
 1SG.IND            much tall.CONT=GA=1SG            NEG.N            BASE=2SG.HON

The reason why this movement is not allowed is not because *kuà'á* cannot move on its own, but because it is composed with *ga*.

<sup>58</sup> I am going to consider the English morphemes *more/-er* as allomorphs of the same underlying morpheme (Galant 1998).

Unlike what we have seen in the non-comparative cases in chapter 4, in comparative constructions *ga* cannot follow a DP (as we would expect since DP is not modifiable by a comparative marker).

- (424) a. *Titìàakó yo'ó jiko kà rà òònjìví Chuchi.*  
 Ti-tìàakó yo'ó **jiko=gà=rà** òònjìví  
 CFR:man-young this tall.CONT=GA=3HUM.M NEG.N  
 Chuchi  
 Chuchi  
 'Este joven es más alto que Chuchi.'  
 'This young man is taller than Chuchi.'
- b. \* *Titìàakó yo'ó kà jiko rà òònjìví Chuchi.*  
 \* [<sub>DP</sub> Ti-tìàakó **yo'ó**]=gà jiko=rà òònjìví  
 CFR:man-young this=GA tall.CONT=3HUM.M NEG.N  
 Chuchi  
 Chuchi
- c. \* *Titìàakó kà yo'ó jiko rà òònjìví Chuchi.*  
 \* Ti-tìàakó=**kà** yo'ó jiko=rà òònjìví Chuchi  
 CFR:man-young=GA this tall.CONT=3HUM.M NEG.N Chuchi

Additionally, (424) also illustrates the meaning based restriction that the *ga* morpheme undergoes in comparatives, such that it can only follow the gradable predicate in question and not any other element of the sentence. Although, as we have previously seen, it would be possible for *ga* to follow the attributive adjective within the DP, if we are comparing the height of the two people and not how young they are the comparative morpheme does not compose with the attributive adjective 'young' but with the predicate 'tall'; hence it is not possible in (424) for *ka* to follow the adjective 'young'.

Finally, there is no restriction in the ordering of the event when using the comparative morpheme *ka* in Mixtec. The first event could have occurred before or after the second event and the sentence would still be meaningful.

- (425) a. *Sìsi Lupe ònì ka tako koni kusi ñá tiaa òònjìví ñá.*  
 Sìsi Lupe ònì=ga tàko koni kusi  
 eat.COMP Lupe three=GA taco yesterday eat.POT  
 ñá tiaa òònjìví=ñá  
 3HUM.SG.F tomorrow NEG.N=3THING  
 ‘Lupe comió tres tacos más hoy que comerá mañana.’  
 ‘Lupe ate three more tacos yesterday than the ones that she will eat tomorrow.’
- b. *Kusi Lupe ònì ka tàko tiaa òònjìví ñàsìsì ñá koni.*  
 Kusi Lupe ònì=ga tàko tiaa òònjìví  
 eat.POT Lupe three=GA taco tomorrow NEG.N  
 ñá-sìsì=ñá koni  
 CFR:3THING-eat.COMP=3HUM.SG.F yesterday  
 ‘Lupe comerá tres tacos más que comió ayer.’  
 ‘Lupe will eat three more tacos tomorrow than the ones that she ate yesterday.’

Thus, we can conclude that the only order that matters in SSM comparatives is the order of degrees.

In (426) we have another example of comparatives. In (426)b we see that the ordering of the two conjuncts matters and it is not possible to invert them.

- (426) a. *Jì ka inì òònjìví Liya.*  
 Jì=ka in=i òònjìví Liya  
 happy.CONT=GA mind=1SG NEG.N Liya  
 ‘Yo soy más feliz que Liya.’  
 ‘I am happier than Liya.’
- b. \**Òònjìví Liya jì ka inì.*  
 \*Òònjìví Liya jì=ga in=i  
 NEG.N Liya happy.CONT=GA mind=1SG

To create a diminutive we would use ‘less’ (*cha*, literally ‘little’) to indicate the different ordering of the degrees of the predicates (similarly to English).

- (427) *Jì cha inì òònjìví Liya.*  
**Jì** **cha** **in=i** òònjìví Liya  
 happy.CONT little mind=1SG NEG.N Liya  
 ‘Yo soy menos feliz que Liya.’  
 ‘I am less happy than Liya.’

- (428) *Yu'ù jiko kuà'á kàì òònjìvì mee ní.*  
 Yu'ù            **jiko**            **cha=i**            òònjìvì            Liya  
 1SG.IND        tall.CONT        little=1SG        NEG.N            Liya  
 'Yo soy menos alta que Liya.'  
 'I am less tall than Liya.'

In (429) we cannot use the comparative morpheme with *cha*, as the meaning would change into 'a little more'.

- (429) *Jìi cha ka inì òònjìvì Liya.*  
**Jìi**            **cha=ga**            **in=i**<sup>59</sup>            òònjìvì            Liya  
 happy.CONT    little=GA        mind=1SG        NEG.N            Liya  
 'Yo estoy un poco más feliz que Liya.'  
 'I am a little happier than Liya.'

Summing up, in comparative constructions<sup>60</sup> SSM needs a comparative morpheme, namely the morpheme *ga*. *Ga* composes semantically with the element which it modifies.

Here is an example of all the possible positions taken by the *ga* morpheme within a comparative construction when it functions as a comparative morpheme.

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<sup>59</sup> Mr. Cortés suggested that *alegre* 'happy' is expressed by a compound verb in Mixtec formed by *jìi* 'happy' and *inì* 'mind'.

<sup>60</sup> So far I have shown only the conjoined comparative, but I will also show the other two constructions later – as we will see the comparative morpheme is the same, and with the same syntactic distribution, in all the three comparative constructions.

Table 11. Summary of the position taken by *ga* in comparative

	Position of <i>ga</i>	Comparatives
Ga occurring VP-internally	Following a verb	Yes
	Following an adverb	Yes
	Following a predicative adjective	Yes
	Following <i>kuà'á</i>	Yes
	Following a measure phrase	Yes
	Following <i>kuà'á</i>	Yes
Ga occurring DP-internally	Following an attributive adjective	Yes
	Following a numeral	Yes
	Following a DP	No

In the following subsections I offer an empirical description of the three comparative constructions in SSM.

### 5.4.3. Comparative construction types in SSM

Based on Stassen's (1985) typology there are three types of comparative constructions in SSM, conjoined comparatives (430), locative comparatives (431) and particle comparatives (432).

- (430) *Yu'ù jiko kai, òònjiví mee nì.*  
 Yu'ù            jiko=**ga**=ì                            ,            **òònjiví**            mee=nì  
 1SG.IND        tall.CONT=GA=1SG                            NEG.N            BASE=2SG.HON  
 'Yo soy más alto que usted.'  
 'I am taller than you.'

- (431) *Yu'ù jiko kai nòò mee nì.*  
 Yu'ù            jiko=**ga**=ì                            **nòò**            mee=nì  
 1SG.IND        tall.CONT=GA=1SG                            on            BASE=2SG.HON  
 'Yo soy más alto que usted.'  
 'I am taller than you.'

- (432) *Yu'ù jiko kàì ja mee nì.*  
 Yu'ù            jiko=**ga**=ì            **ja**    mee=nì  
 1SG.IND        tall.CONT=GA=1SG    than    BASE=2SG.HON  
 'Yo soy más alto que usted.'  
 'I am taller than you.'

In the following subsections I will go over each construction in detail.

#### 5.4.3.1. Conjoined comparatives in SSM

SSM is able to create comparatives by conjoining two clauses, without an overt conjunction, and with a negation particle negating the DP in the second clause (similarly to Hixkaryana and Menonimi, among others, as discussed by Stassen), which in SSM is a phrasal remnant, as I will show.

- (433) *Yu'ù jikò kàì, òònjiví mee ní.*  
 Yu'ù            jikò=**ga**=ì            ,            òònjiví            mee=ní  
 1SG.IND        tall.CONT=GA=1SG            NEG.N            BASE=2SG.HON  
 'Yo soy más alto que usted.'  
 'I am taller than you.'

In conjoined comparatives there are two conjuncts. In SSM support for the existence of two conjuncts comes from the possibility of having a prosodic break between them, which would be otherwise infelicitous if we were dealing with a monoclausal construction.

We would also expect a conjunct in between the two clauses, but although one of my language teachers was able to insert it, he said, "We would never use it when we speak."

- (434) *??? Yu'ù jikò kàì ti òònjiví mee ní.*  
 ??? Yu'ù            jikò=**ga**=ì            **ti**            òònjiví            mee=ní  
 1SG.IND        tall.CONT=GA=1SG            and            NEG.N            BASE=2SG.HON  
 'Yo soy más alto que usted.'  
 'I am taller than you.'

A test that we would use in English to check whether we are dealing with a clause or a phrase is the use of subcomparatives, a comparative construction which does not involve ellipsis.

- (435) The table is longer than it is wide.

As we can observe we obtain a relative clause construction in SSM but it has a light-head that refers to amount and not to the table (for more on this point see later in this section).<sup>61</sup>

- (436) *Káá ka'ni kà mesa òònjiví ña jiko tó.*  
 Káá ka'ni=kà mesa òònjiví ña-jiko=tó  
 seem.CONT large=GA table NEG.N CFR:THING-tall=3WOOD  
 'La mesa parece más grande que alta.'  
 'The table seems larger than it is high.'  
 Lit.: 'The table is larger, not the one (degree to which) it is high.'

The relative clause second conjunct is possible when the predicate of the second clause is different from the predicate of the first clause. That is also true when the aspect of the verb changes as in (437) and when the verb changes as in (438)-(439). The result is that the second clause acquires the shape of a light-headed relative, headed by the classifier that fits the meaning. *Ña* is the head of a light-headed relative clause, which we can translate in English as 'one'. For more information see also chapter 3.

- (437) *Sisi kà tako òònjiví ñáko'o ìn kusì.*  
 Sisi=ga=i tako òònjiví ñá-ko'o=ìn  
 eat.COMP=GA=1SG taco NEG.N CFR:THING-go.POT=1SG  
 kus=i.  
 eat.POT=1SG  
 'Yo comí más tacos ayer que comeré mañana.'  
 'I ate more tacos than [the ones] I am going to eat.'  
 Lit.: 'I ate more tacos, not the ones I am going to eat.'

- (438) *Jakua'a kà òònjiví ñàkixì.*  
 Jakua'a=ga=i òònjiví ñà-kix=i  
 study.POT=GA=1SG NEG.N CFR:THING-sleep.POT=1SG  
 'Voy a estudiar más que voy a dormir.'  
 'I will study more than I will sleep.'  
 Lit.: 'I will study more, not the one (degree to which) I will sleep.'

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<sup>61</sup> It is important to say that the constructions headed by a light-head cannot be possessive nominalization, refer to chapter 3 for how possessives are construct, the morpheme *si* would occur between the possessum and the possessor.

- (439) *Kixi kai òònjiví ñà jakua 'aì.*  
 Kixi=ga=i òònjiví ñà-jakua'a=i  
 sleep.POT=GA=1SG NEG.N CFR:THING-study.POT=1SG  
 ‘Voy a dormir más que voy a estudiar.’  
 ‘I will sleep more than I will study.’  
 Lit.: ‘I will sleep more, not the one (degree to which) I will study.’

Example (438) is a very interesting case because there is no overt object of ‘study,’ yet the pronoun referring to THING is used. This is true even in example (439) with ‘sleep,’ where ‘sleep’ is an intransitive verb and it should not take any direct object. Thus, we can conclude that the third person classifier referring to not-round not-wooden inanimates can also refer to ideas or degrees. If the verb changes, but the direct object stays the same, another appropriate pronoun would be used, as (440), with the spherical classifier referring to oranges. As we would not normally be able to use the pronoun referring to things (*ñá*) for oranges, it follows that it cannot be used even in comparative constructions (441).

- (440) *Viti sàsì ò'òn kà tikuaa òònjiví ti sàsì kònì.*  
 Viti sàs=i ò'òn=kà tikuaa òònjiví **ti-**  
 today eat.COM=1SG five=GA orange NEG.N CFR:SPHERICAL-  
 sàs=i kònì  
 eat.COMP=1SG yesterday  
 ‘Today I ate five oranges more than I ate yesterday.’  
 Lit.: ‘Today I ate five more oranges, not the ones I ate yesterday.’<sup>62</sup>
- (441) \* *Viti sàsì ò'òn kà tikuaa òònjiví ñá sàsì kònì.*  
 \* Viti sàs=i ò'òn=kà tikuaa òònjiví **ñá-**  
 today eat.COM=1SG five=GA orange NEG.N CFR:THING-  
 sàs=i kònì  
 eat.COMP=1SG yesterday

<sup>62</sup> As mentioned in chapter 4, contrasting information are available for a sentence like the one in (440) on whether it is ambiguous between a comparative and an additive. I will further explore this point in the future.

The validity of this restriction adds to the possibility that the classifier functions as some kind of nominalizer, because as (440) demonstrates, and as we already know from chapter 3, in SSM it is not possible to use the classifier for non-round non-wooden inanimates (the 'thing' classifier) for objects that have these characteristics (e.g. are wooden). However, when the focus of the construction is degree, then *ñá* degree would be the argument. Furthermore, verbs like 'sleep', which normally would not take an object argument, can still occur in this comparative structure with the classifier for non-wooden non-round inanimates. Thus, I conclude from this data that the syntactic limitation we see in SSM on having the second conjunct being a DP is actually a requirement of the negation used to introduce it, as it can only take a nominal element. Moreover, it follows that there is a focus position to which the standard moves and it is always to the left, since there is a topic position to the left of the verb. I consider the second conjunct a clause and not a phrase in its underlying structure, with the understanding that in the future more in depth work is necessary to flesh out its syntax and semantics.

As mentioned in chapter 3, *òònjiví* is used to negate a DP. This is true when contrasting two direct objects (442) or when focusing one direct object in a situation which is not out of the blue (443).

(442) Context: someone asks me if I ate the last apples in the kitchen.

*Sàsì tikua'á, òònjiví manzana.*

Sàs=ì	tikua'á	,	òònjiví	manzana
eat.COMP=1SG	orange		NEG.N	apple

'Yo comí naranjas, no manzanas.'

'I ate oranges, not apples.'

(443) Context: someone asks me if I ate the last apples in the kitchen.

*Sàsì, òònjiví manzana.*

Sàs=ì	,	òònjiví	manzana.
eat.COMP=1SG		NEG.N	apple

'Comí, pero no [comí] manzanas.'

'I ate, [but] not apples.'

It is also possible to move the DP containing the nominal negation to the left of the clause in a cleft-like fashion, while retaining the focus meaning (see chapter 3 section 3.3).

- (444) *Ò̀n̄jìvì xitá s̄éen Liya.*  
 Ò̀n̄jìvì            xitá    s̄éen            Liya  
 NEG.N            tortilla buy.CONT    Liya  
 ‘No son tortillas lo que compra Liya.’  
 ‘It’s not tortillas that Liya buys.’

This same construction can be used if we compare subjects, direct objects, or indirect objects.

- (445) *S̄isi k̄àì tako ò̀n̄jìvì mee ní.*  
 S̄isi=k̄à=ì            tako    ò̀n̄jìvì            mee=ní  
 eat.CONT=GA=1SG    taco    NEG.N            BASE=2SG.HON  
 ‘Yo comí más tacos que usted.’  
 ‘I ate more tacos than you.’  
 Lit.: ‘I did more taco eating, not you.’

- (446) *K̄ási kuá’a ka t̄ina nd̄ika ò̀n̄jìvì tikuaá.*  
 K̄ási            kuá’a=ga    t̄ina    nd̄ika    ò̀n̄jìvì            tikuaá  
 eat.CONT    much=GA    dog    banana NEG.N            orange  
 ‘El perro come muchos plátanos más que [come] naranjas.’  
 ‘The dog is eating many more bananas than oranges.’  
 Lit.: ‘The dog is eating many? more bananas, not oranges.’

- (447) *Tantà’a k̄àì letra Liya ò̀n̄jìvì Chuchi.*  
 Tantà’a=ḡà=ì            letra    Liya    ò̀n̄jìvì            Chuchi  
 send.CONT=GA=1SG    letter    Liya    NEG.N            Chuchi  
 ‘Yo mando más cartas a Liya que a Chuchi.’  
 ‘I am sending more letters to Liya than to Chuchi.’  
 Lit.: ‘I am sending more letters to Liya, not Chuchi.’

(447) can also mean ‘I am sending more letters to Liya than Chuchi is.’

#### 5.4.3.2. Locative comparatives in SSM

Locative comparatives are monoclausal and they are characterized by a locative morpheme introducing the standard of comparison.

- (448) *Yu'ù jikò kai nòò me ní.*  
 Yu'ù            jikò=ga=i    **nòò**    mee=ní  
 1SG.IND        tall=GA=1SG    on        BASE=2SG.HON  
 'Yo soy más alto que usted.'  
 'I am taller than you.'

We are sure that we are dealing with one clause and not two because of the impossibility of having any prosodic break before the standard of comparison introduced by the locative morpheme *nòò*.

- (449) \* *Yu'ù jikò kai, nòò me ní.*  
 \* Yu'ù            jikò=ga=i    ,        **nòò**    mee=ní  
 1SG.IND        tall=GA=1SG        on        BASE=2SG.HON

We are certain that *nòò* is a locative morpheme because it is a preposition when it is not used in a comparative construction, and it is derived from a body part (see also chapter 3 for more information).

- (450) *Tuti kanoó nòò mesa.*  
 Tuti    kanoó                    **nòò**    mesa  
 paper   be.located.CONT        on        table  
 'La hoja está encima de la mesa.'  
 'The paper is located on the top of the table.'

*Nòò* can only be used in a comparative sentences with gradable predicates such as 'tall' (448), 'fat' (451) or 'old' (452), but not with non-gradable predicates like 'eat' (453), 'cook' (454), 'run' (455) or 'write' (456).

- (451) *Chika'no kài nòò me ní.*  
 Chika'no=gà=i        nòò    me=ní  
 fat.COMP=GA=1SG    on        BASE=2SG.HON  
 'Yo soy más gordo que tú.'  
 'I am fatter than you.'

- (452) *Kaa yata kà Chuchi nòò Juan.*  
 Kaa yata=gà Chuchi nòò Juan  
 be.CONT old=GA Chuchi on Juan  
 ‘Chuchi es mayor que Juan.’  
 ‘Chuchi is older than Juan.’
- (453) # *Sisi kài táko nòò me ní.*  
 # Sisi=ga=i táko nòò me=ní  
 eat.COMP=GA=1SG taco on BASE=2SG.HON  
 ‘I ate more tacos in front of you.’  
 Intended: ‘I ate more tacos than you.’
- (454) # *Nìchijó kài nduchì kusi Juan nòò Chuchi.*  
 # Nìchijó=gà=i nduchì kusi Juan nòò Chuchi  
 cook.COMP=GA=1SG bean eat.CONT Juan on Chuchi  
 ‘I cooked more beans for Juan in front of Chuchi.’  
 Intended: ‘I cooked more beans for Juan than for Chuchi.’
- (455) # *Kánàkónò kài nòò yo’ó.*  
 # Kánàkónò=gà=i nòò yo’ó  
 run.CONT=GA=1SG on 2SG.IND  
 ‘I am running more in front of you.’  
 Intended: ‘I am running more than you.’
- (456) # *Tiaa kài lètrá nòò yo’ó.*  
 # Tiaa=gà=i lètrá nòò yo’ó  
 write.POT=GA=1SG letter on 2SG.IND  
 ‘I write more letters in front of you.’  
 Intended: ‘I write more letters than you.’

However, *nòò* can take a light-headed relative clause as its complement 0-(458).

- (457) *Tuti kanoó nòò mesa sèenì koni.*  
 Tuti kanoó nòò mesa sèen=i koni  
 paper be.located.CONT on table buy.COMP=1SG yesterday  
 ‘La hoja está encima de la mesa que compré ayer.’  
 ‘The paper is located on the top of the table I bought yesterday.’

- (458) *Tuti kanoó nòò to sèenì koni.*  
 Tuti kanoó nòò to-sèen=i  
 paper be.located.CONT on CFR:3WOOD-buy.COMP=1SG  
 koni.  
 yesterday  
 ‘La hoja está encima de la (mesa) que compré ayer.’  
 ‘The paper is located on the top of the one (table) I bought yesterday.’

Thus, we can conclude that the preposition *nòò* and the comparative *nòò* present different properties despite being homophonous.

### 5.4.3.3. Particle comparatives in SSM

The SSM particle comparative is monoclausal.

- (459) *Yu’ù jikò kai ja me ní.*  
 Yu’ù jikò=ga=i ja me=ní  
 1SG.IND tall=GA=1SG than BASE=2SG.HON  
 ‘Yo soy más alto que usted.’  
 ‘I am taller than you.’

- (460) *Sìsi kai tako ja me ní.*  
 Sìsi=ga=i táko ja me=ní  
 eat.COMP=GA=1SG taco than BASE=2SG.HON  
 ‘Yo comí más tacos que usted.’  
 ‘I ate more tacos than you.’

We know that we are not dealing with a conjoined comparative because a prosodic break is not possible before the morpheme *ja*.

- (461) \* *Yu’ù jikò kai, ja me ní.*  
 \* Yu’ù jikò=ga=i , ja me=ní  
 1SG.IND tall=GA=1SG than BASE=2SG.HON

It seems that *ja* is a recent introduction into the language, as generally younger speakers, 30-40 years old and younger, use it as a comparative particle, while older speakers do not use it in comparatives. To the best of my knowledge the particle *ja* does not occur in any other construction

in the language, other than with the meaning of “then” in a sentence where a subordinate clause is introduced, in which case older speakers use it as well as younger ones.<sup>63</sup>

- (462) *Kaja chino yó ndì tiààn ja nìndee yó iin kivi.*  
 Kaja chino=yó ndì tiààn ja nìndee=yó iin  
 do.POT work=1PL.INC from morning then rest.POT=1PL.INC one  
 kivi.  
 day  
 ‘Vamos a seguir trabajando hasta la mañana, y luego descansamos un día.’  
 ‘We will continue working until morning and then we will rest for one day.’

However, in contrast to the original use of *ja* as ‘then’, there is no temporal order requirement between the target and the standard of comparison when *ja* is used to introduce the standard of comparison. I take this to show that this particle can be analyzed as a standard marker similar to English “than.”

Similarly to what we have seen with conjoined comparatives in SSM (section 5.4.3.1), *ja* can also introduce a light-headed relative clause. In this case, then, further work is necessary to understand whether we are dealing with a phrasal or a clausal comparative.

- (463) *Kixi kài ja ñàjakua’ aì.*  
 Kixi=ga=i ja ñà-jakua’ a=i  
 sleep.POT=GA=1SG than CFR:3THING-study.POT=1SG  
 ‘Duermo más que estudio.’  
 ‘I sleep more than I study.’
- (464) *Jakua’ a kài ja ñàkixi.*  
 Jakua’ a=ga=i ja ñà-kix=i  
 study.POT=GA=1SG than CFR:3THING-sleep.POT=1SG  
 ‘Estudio más que duermo.’  
 ‘I study more than I sleep.’

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<sup>63</sup> I am thankful to Mike Galant (p.c.) for introducing me to the fact that also in English *than* is derived from *then* and these words were not distinguishable in form until 1700. Thus the development seems to have occurred from the counterpart in West Germanic of “A is bigger, then (“after that”) B” to “A is bigger than B”.

## **5.5. A proposal for SSM comparatives**

Each of the three SSM comparative constructions presents distinct semantic and syntactic characteristics. Kennedy (2007) uses three tests to judge whether a comparative construction is implicit or explicit: the crisp judgment context test, absolute-standard predicates test, and acceptability with differential measure phrases test (see §5.2). I will use these tests to show that in SSM the comparatives are explicit.

In SSM all the comparative constructions include a comparative morpheme, the clitic *ga*, whose non-comparative uses were surveyed in chapter 4 (see also §5.4.2). Whether *ga* contributes semantically to the comparative (as the English *-er/more* does) depends on the result of the tests. If all of them are positive then we would expect that indeed *ga* functions semantically as a comparative morpheme when used in a comparative construction, and this is what I will conclude.

### **5.5.1. The crisp judgment test**

Implicit comparisons, where the predicate is in its positive form ('tall' rather than 'taller'), are expected to be infelicitous in crisp judgment contexts (see section 5.2). As the Washo example below shows, when there is a minimal difference between the two gradients compared, and the sentence is infelicitous, then we are dealing with an implicit comparison.

- (465) Context: comparing two ladders, where one is only slightly taller than the other.
- |   |                             |                |                                   |                |               |
|---|-----------------------------|----------------|-----------------------------------|----------------|---------------|
| # | <i>wi:di?</i>               | <i>ʔitmáŋa</i> | <i>delkáykayi?</i>                | <i>k'é?i</i>   | <i>wi:di?</i> |
|   | <i>wii:di?</i>              | <i>ʔitmáŋa</i> | <i>de-ʔil-kaykay-i?</i>           | <i>k'-e?-i</i> | <i>wi:di?</i> |
|   | this                        | ladder         | NMLZ-ATTR-tall-ATTR <sup>64</sup> | 3-COP-IPFV     | this          |
|   | <i>delkáykayi?é:s</i>       |                | <i>k'é?aš</i>                     |                |               |
|   | <i>de-ʔil-kaykay-i?-e:s</i> |                | <i>k'-e?-a?-š</i>                 |                |               |
|   | NMLZ-ATTR-tall-ATTR-NEG     |                | 3-COP-AOR-SR                      |                |               |
- Intended: ‘This ladder is taller than that one.’  
(lit.: ‘This ladder is tall, that one is not tall.’) Washo (Bochnak 2014: 171)

However, in SSM in a similar context the sentence is felicitous, for all three comparative constructions.

- (466) Context – No Crisp judgment: I am 180 centimeters tall and you are 150 centimeters tall.
- a. *Yu'ù jiko kà oonjiví me nì.*
- |         |                    |         |              |
|---------|--------------------|---------|--------------|
| Yu'ù    | jiko= <b>ga</b> =ì | oonjiví | me=nì.       |
| 1SG.IND | tall.CONT=GA=1SG   | NEG.N   | BASE=2SG.HON |
- ‘Yo soy más alto que usted.’  
‘I am taller than you.’
- b. *Yu'ù jiko kà ja mee nì.*
- |         |                    |      |              |
|---------|--------------------|------|--------------|
| Yu'ù    | jiko= <b>ga</b> =ì | ja   | mee=nì       |
| 1SG.IND | tall.CONT=GA=1SG   | than | BASE=2SG.HON |
- ‘Yo soy más alto que usted.’  
‘I am taller than you.’
- c. *Yu'ù jiko kà noo me nì.*
- |         |                    |     |              |
|---------|--------------------|-----|--------------|
| Yu'ù    | jiko= <b>ga</b> =ì | noo | me=nì        |
| 1SG.IND | tall.CONT=GA=1SG   | on  | BASE=2SG.HON |
- ‘Yo soy más alto que usted.’  
‘I am taller than you.’

<sup>64</sup> The glosses used by Bochnak (2014) are the following: NMLZ: nominalizer, ATTR: attributive, COP: copula, IPFV: imperfective, NEG: negation, AOR: aorist, SR: switch reference, STATIC: prefix on whether predicates, 3: third person.

(467) Context – Crisp judgment: I am 180 centimeters tall and you are 179 centimeters tall.

- a. *Yu'ù jiko kàì oonjìví me nì.*  
 Yu'ù            jiko=**ga**=ì            oonjìví            me=nì.  
 1SG.IND        tall.CONT=GA=1SG    NEG.N            BASE=2SG.HON  
 'Yo soy más alto que usted.'  
 'I am taller than you.'
- b. *Yu'ù jiko kàì ja mee nì.*  
 Yu'ù            jiko=**ga**=ì            ja            mee=nì  
 1SG.IND        tall.CONT=GA=1SG    than        BASE=2SG.HON  
 'Yo soy más alto que usted.'  
 'I am taller than you.'
- c. *Yu'ù jiko kàì noo me nì.*  
 Yu'ù            jiko=**ga**=ì            noo    me    nì  
 1SG.IND        tall.CONT=GA=1SG    on        BASE    2SG.HON  
 'Yo soy más alto que usted.'  
 'I am taller than you.'

This result is particularly interesting for the conjoined comparatives with *oonjivi*, as we would expect that 'tall' would express that the one property holds for one argument (namely 'I' in 'I am tall') and that the opposite holds for the other argument (namely 'you' in 'you are not tall'); however, this is not accurate and it seems that the comparative morpheme actually semantically contributes to the comparative.

### 5.5.2. Absolute-standard predicates test

Implicit comparisons are expected to be infelicitous with absolute-standard predicates since their standard does not depend on the context; if we say that one bar is bent, it would be false to assert that the other one is not when the context provides that both bars have some degree of bentness. On the other hand, explicit comparisons are supposed to be felicitous with absolute-standard predicates because their comparative morpheme needs two distinct degrees of "bentness" where we are comparing bars that have different degrees of bentness. The example reported from Washo

shows a case of an implicit comparison, while SSM shows that once again all three comparative constructions are explicit.

- (468) # *wi:diʔ ʔilk'unk'uniʔaš*                      *wi:diʔ ʔilši:šibiʔi*  
*wi:diʔ ʔilk'unk'uniʔaš*                      *wi:diʔ ʔilši:šibiʔi*  
 this    ATTR-bent-ATTR-AOR-SR    this    ATTR-straight-ATTR-IPFV  
 Intended: ‘This one is more bent than this one.’  
 (lit.: ‘This one is bent, this one is straight.’) Washo (Bochnak 2013: 172)

In the case of Mixtec the word ‘curved’ is used instead of ‘bent’ but it shares the same absolute nature. Again for this test, all three forms of comparatives in Mixtec are felicitous, which means that they can express a case in which there is a degree difference between the two objects compared.

- (469) *Nikàvà kà barra yó'ò òònjiví ñá seen.*  
 Nikàvà=kà                      barra yó'ò    òònjiví                      ñá-seen  
 curve.COMP=GA              bar    this    NEG.F    AFF    CFR:THING-that  
 ‘Esta barra está más curva que esa.’  
 ‘This bar is more curved than that one.’

- (470) *Nikàvà kà barra yó'ò nòò ñá seen.*  
 Nikàvà=kà                      barra yó'ò    nòò                      ñá-seen  
 curve.COMP=GA              bar    this    on                      CFR:THING-that  
 ‘Esta barra está más curva que esa.’  
 ‘This bar is more curved than that one.’

- (471) *Nikàvà kà barra yó'ò ja ñá seen.*  
 Nikàvà=kà                      barra yó'ò    ja                      ñá-seen  
 curve.COMP=GA              bar    this    than                      CFR:THING-that  
 ‘Esta barra está más curva que esa.’  
 ‘This bar is more curved than that one.’

Once again, the result of the conjoined comparative for this test is surprising, because if the comparative morpheme were not semantically participating in the comparison then we would have expected (469) to be infelicitous, as one bar would have been asserted to be curved and the other would not; however, that is not what we see in SSM.



- (475) *Jikó Liya iin metro kà ja Lupe.*  
 Jikó            Liya    **iin**    **metro=kà**    ja    Lupe  
 tall.CONT    Liya    one    meter=GA    than    Lupe  
 ‘Liya mide un metro más que Lupe.’  
 ‘Liya is one meter taller than Lupe.’

This result is in accordance with the other results obtained for tests on implicit versus explicit comparisons, thus confirming that SSM comparatives all express explicit comparisons.

### 5.6. A new type of conjoined comparative

SSM has a conjoined comparative construction that uses a comparative morpheme *ga* for comparison over any scalar property. As stated in section 5.4.2, I assume that the second conjunct in this construction is a reduced clause. I argue that the first clause with the comparative morpheme on its own means that there is an individual, or a set of individuals, which is salient in the discourse and that I am taller than, as in (476), which, I argue, is an incomplete comparative.

- (476) *Yu’ù jikò kai.*  
 Yu’ù            jikò=ga=i  
 1SG.IND        tall.CONT=GA=1SG  
 ‘Yo soy más alto.’  
 ‘I am taller.’

When we only have the clause with the comparative marker, and we do not have a second coordinate clause, or a standard phrase, the meaning in Mixtec is that of an incomplete comparative (this term was created by Sheldon 1945, as cited by Schwarzschild (2008), but today it is also known as context comparative (Hohaus 2015)). A context or incomplete comparative implies completion of the comparative meaning, as in (477).

- (477) {Come out onto the porch.} It’s cooler here.            (Schwarzschild 2008:89)

The implied completion in (477) is “than inside” and it is made clearer by the preceding sentence. The same can be done for (476) if I offer a context, as I have done with both (478) and (479), depending on the content of the comparison set.

(478) Context 1: There is a group of tall people, all with different levels of tallness (I offered a drawing with a number equivalent to the height of each person). Can I say (476)?

(479) Context 2: Chuchi and I are both basketball players, I am 198 centimeters tall and Chuchi is 190 centimeters tall. Can I say (476)?

Both contexts were true, and as we can imagine the context did not need to be uttered, but it would have been enough if the speaker and the listener were in the situation described by the context. I conclude that *ga* has the property of referring to the context, functioning as a degree quantifier, which has an argument index whose value is determined by the pragmatics derived from the discourse (von Stechow 1994, Schwarzschild 2010) and I will add by the shared knowledge of the speakers.

Summing up, when it comes to the first conjunct of a conjoined comparative, *jikò* is a gradable predicate, *d* is a variable over degrees, *x* is a variable over individuals, and HEIGHT is a measure function relating *x* to *d*, a degree on the scale of height (Cresswell 1976, von Stechow 1984, Heim 1985, 2001, Kennedy & McNally 2005 among others).

(480)  $[[jikò]]^C = \lambda d. \lambda x. HEIGHT(x) \geq d$

Applied the semantics offered for the incomplete comparative's operators by Hohaus (2015), I assume the following semantics for the comparative morpheme *ga*.

(481)  $[[gac]] = \lambda R_{\langle d, \langle e, t \rangle \rangle}. \lambda x. MAX(\lambda d. R(x)(d) = 1) > MAX(\lambda d. \exists x \in C [R(x)(d)])$

When we plug in (480) and (481) in a sentence, we obtain (482): 'The maximal degree *d* such that Liya is *d*-tall exceeds some contextually provided height degree.'

- (482)  $[[ [Liya [tall_{\langle d, \langle e, t \rangle} \rangle} comparison-ga ] ] ]^c = 1$  iff  
 $[\lambda R_{\langle d, \langle e, t \rangle} \rangle. [\lambda x. MAX(\lambda d. R(d)(x) = 1) = c]] (\lambda d. \lambda x. HEIGHT(x) \geq d)(L) = 1$   
 iff  $MAX(\lambda d. HEIGHT(L) \geq d) > c$

In SSM, when we add the second conjunct the meaning of the first conjunct is restricted.

- (483) *Jikò ka Liya, òònjìvì Chuchi.*  
 Jikò=ga Liya , òònjìvì Chuchi.  
 tall.CONT=GA Liya NEG.N Chuchi  
 ‘Liya es más alta que Chuchi.’  
 ‘Liya is taller than Chuchi.’

I propose that the second conjunct in SSM conjoined comparatives negates an alternative of the first clause. The second conjunct is formed by a contrastive negation which coordinates it with the first conjunct. I will assume that the standard DP is moved to the left periphery of the clause and the rest of the clause can be elided under stripping, as it occurs with not-stripping. However, I am aware that more work needs to be done in order to better understand this construction and to prove that stripping is available in other constructions in SSM.

### 5.7. Summary

The purpose of this chapter was to introduce the last role that the morpheme *ga* has in Mixtec, that of a comparative marker. I have reported data on the three different comparative constructions used in SSM, a particle comparative, a locative comparative and a conjoined comparative, using a preposition. Finally, I have proposed a semantic analysis for the conjoined comparative construction in SSM by proposing an incomplete comparative-like semantics of the first clause, and a focusing of the negative particle introducing a DP. Further work will be necessary to offer an analysis of the other two comparative constructions and to test whether the semantics proposed for the comparative morpheme would still hold.

## Chapter 6

### Conclusion

#### 6.1. Contributions

In this dissertation I proposed a definition for what I call disanaphor morphemes (chapter 2), building off previous work (Mikkelsen & Hardt 2019, Cinque 2016, Oikonomou 2015, Charnavel 2015, Harris 2014, Barros 2011, Kamp 2011, Thomas 2011, Lechner 2010, Kubota & Uegaki 2009, Umbach 2009, Isac & Reiss 2004, Tovena & Van Peteghem 2002, Beck 2000, Culicover & Jackendoff 1995, Heim et al. 1991, and Saxon 1984). I claim that all disanaphor morphemes are deep anaphors indicating a non-identity relationship between the DP that contains them and their antecedent. I listed three characteristics that the disanaphor DPs have, they select an antecedent from the context, they share a common property with their antecedent and they are distinct from their antecedent.

I claimed that disanaphor morphemes are located in a PDP projection that may appear in two positions, one below the numeral projection but above the adjectival projection, and one above the numeral projection but below determiners and Q-adjective. I have demonstrated that each position in English is associated with a specific reading, depending on what the disanaphor *other* modifies. If *other* is in its original position, which is the lower position, it modifies ‘kind of x’ acquiring the meaning ‘distinct kind of x’ (from the distinctness requirement mentioned) if *other* is in its higher position, above the numeral projection, it modifies ‘x’ acquiring the meaning ‘distinct x.’ I have also proposed that the raising of *other* from its original position to the higher position is obligatory in some languages, as for example in Teramano, Abruzzese Italian and in other varieties of Italian. Moreover, I have proposed that the additive reading is not part of the meaning of *other* but that it can be triggered by the context, thus making *other* different from *more*.

I have offered an analysis of the determiner phrase in San Sebastián del Monte Mixtec (SSM) (chapter 3-4) and a wider description of the grammar of the language. This includes the language's phonology, word order, interrogatives, negation, adverbs, classifiers, aspects, and relative clauses among other topics in an overview of the linguistic features of the language. In particular I focused on those aspects of the language that are relevant for the determiner phrase and comparative constructions.

I have presented crosslinguistic evidence in support of the definition offered for disanaphors and of the syntactic position proposed for them (chapter 4). I have argued that SSM *ga* is a disanaphor morpheme located in the same position where *other* is generated, below the numeral projection. However, since *ga* is a clitic, and since the projection including the noun and the adjectives in SSM Mixtec can raise higher than in English and Italian, the distribution of *ga* looks superficially different than the distribution of *other*. I also proposed that when *ga* occurs in the VP it is not a disanaphor but rather an additive morpheme.

Finally, since *ga* in SSM also occurs in comparative constructions; thus VP-internally *ga* can function as an additive morpheme or as a comparative morpheme, similarly to English *more*. I offered a detailed description of the three comparative constructions in SSM (chapter 5): particle comparatives, locative comparatives and conjoined comparatives. I set this description within the typological claims made by Stassen (1985) and the more recent theoretical literature on comparatives; in so doing, I offered the argument that conjoined comparatives can co-occur with gradable predicates. I focused specifically on conjoined comparatives in SSM and I offered a possible analysis.

## 6.2. Avenues for future research

There are many unanswered questions beyond the scope of this dissertation, which I hope to explore in the future. First, although I was able to make a typological claim for disanaphor morphemes, thanks to the help of SSM and Italian, my proposal should be extended to other languages. If my prediction is correct, every language has disanaphor morphemes, with the same core meaning and the same syntactic position. In order to facilitate this typological work I hope to define a set of clear contexts, some of which are already presented in this dissertation, to help build a general questionnaire applicable to other languages.

Second, I want to offer a unified analysis for *other* and *else*. Some of the work I have done on *else* did not find its way into this dissertation, and I want to make sure that I integrate it and to explore it further.

Third, work on the interaction between the readings available and focus of *other* needs to be taken into consideration. I will explore this topic by building off previous work done on Greek by Oikonomou (2015) and by looking more in depth at the data included in chapter 2 about the influence that focus might have on interpretation.

Fourth, now that I have a clearer understanding of the core meaning of the disanaphor morphemes and of the readings associated with it, I would like to repeat an experiment I ran three years ago in order to see how context might affect word order. This time around I would run it for both English and Italian, not only for Italian, and I expect that the results will confirm the claims I have made in chapter 2.

Fifth, I want to further explore other occurrences of *other*, as in *each other* and *one another*, etc. as noted in chapter 1, in order to add to work by Belletti (1982).

Sixth, I want to expand chapter 3 into a grammar of SSM; as I mentioned in chapter 1, it is important to produce material that is not only beneficial for my career but also to the community without whom this dissertation would not have been written. My hope is that the grammar will be a collaboration with the community and that it will be possible to write it in Spanish rather than English.

Seventh, there are still many open questions about the use of *ga* within the verb phrase in SSM which need further investigation. It is important to define the predicates which do not allow the occurrence of *ga* and to understand why it is not possible for *ga* to co-occur with those predicates. It is also relevant to see whether *ga* in this case is really an additive particle.

Finally, I plan to propose an analysis for locative comparatives and particle comparatives in SSM, and to explore superlatives as well. Moving forward I want to look into other conjoined comparatives to see whether other languages have a similar construction to that of SSM.

I look forward to the listed research questions above, as well as others outlined briefly in chapter 1; this research program in many ways has just started.

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