

“Mixed” conjoined comparatives in a degreeful language: San Sebastián del Monte Mixtec¹
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1. The puzzle

Conjoined comparatives have traditionally been described as:

- involving two conjoined clauses to associate the target of comparison and the standard of comparison (Stassen 1985),
- having the positive form of predicates surface (Kennedy 1999, 2011).

Moreover, Mixtec has been included as a classic example of conjoined comparatives.

San Sebastián del Monte Mixtec (ISO: mks) also presents conjoined comparatives.

(1) [TP₁ yu'ù jikò=ka=i] , [TP₂ òònjìví Chuchi].
 1SG.IND tall.CONT=GA=1SG NEG Chuchi
 ‘Yo soy más alto que Chuchi.’
 ‘I am taller than Chuchi.’

However, SSM does not fit into the current syntactic or semantic definition of conjoined comparatives.

Goals of the talk:

- We support the idea that we are dealing with conjoined comparatives in SSM, but we expand our syntactic typology of conjoined comparatives
- we also expand our definition of conjoined comparatives to include conjoined comparatives with degrees (Davis & Mellesmoen 2019, Mantenuto 2020).
- we argue that the presence of degree morphology requires an expansion of the analysis of the semantics of conjoined comparatives and an expansion of the typology of comparatives more widely, to account for Mixtec but also for other mixed conjoined comparatives.

Roadmap:

- §2: introduces a brief outline of SSM with the information necessary to follow this talk.
- §3: discusses conjoined comparatives in SSM and lays out the problematics for the current understanding of conjoined comparatives.
- §4: offers evidence for the comparative construction in SSM.
- §5: presents the semantic properties of SSM mixed conjoined comparatives, and it discusses parts of a working analysis.
- §6: concludes and discusses future research questions.

¹ We would like to thank Félix Cortés and Adrian Davila Espinoza, and the whole community in San Sebastián del Monte for welcoming us and teaching us Mixtec. Any mistakes are our own. Abbreviations which are used in this paper: BASE = pronominal base, CFR = classifier, COMP = completive, COMP2 = completive used with actions on going, CONT = continuative, F = feminine, HON = honorific, HUM = human, IND = independent pronouns, LNK = linker, M = masculine, PL = plural, NEG = negation, NEG.IRR = negation for irrealis, NEG.REAL = negation for realis, POT = potential, SG = singular.

2. Some information about San Sebastián del Monte Mixtec

San Sebastián del Monte Mixtec (ISO: mks; henceforth: **SSM**), also known as Tò'on Ndà'vi, is part of the Mixtecan language family, Otomanguan stock (Rensch 1976). The Mixtecan language family consists of Mixtec, Cuicatec and Trique, though Mixtec and Cuicatec are part of the same subgroup, also called Mixtecan (Josserand 1983: 99-101).

- There are approximately 500,000 speakers of Mixtec languages in southern Mexico (in the states of Oaxaca, Puebla and Guerrero). However, through a migration process Mixtec is spoken in almost the whole country of Mexico. There are many varieties of Mixtec, many times very different from each other.
- In San Sebastián del Monte, Mixtec is the language used at home and in the common interactions in the town, as well as in the city hall (*agencia*) and in the Taekwon-do practices; however, the official educational language is Spanish.
- This work is part of a larger project which includes documentation and analysis of SSM and revitalization.
- San Sebastián del Monte is a town in the Santo Domingo Tonalá municipality of Oaxaca State, southern Mexico, in the district of Huajuapán, 45km southwest of Huajuapán de León, with a population of approximately 2000 people (latitude: 17.677778, longitude: -98.021944).



Figure 1: San Sebastián del Monte (right) as located within Mexico (left). Figure made with ggmaps (Kahle & Wickham 2013).

- SSM is a tonal language with three tones (Mantenuto 2020) and it has a VSO word order, though other word orders are available depending on information structure (focus and topic).

(2) Sísi tinà xità
 eat.CONT dog tortilla
 ‘El perro come la tortilla.’
 ‘The dog eats the tortilla.’

VSO

- The element which is in focus or in topic position needs to be to the left of the verb.

(3) Lupi tà'vi vásò
Lupi break.COMP glass
'LUPI rompió el vaso.'
'LUPI broke the glass.'

S_{FOCUS}VO

(4) Lupi tà'vi=ñá vásò
Lupi break.COMP=3SG.F glass
'Lupi, la que rompió el vaso.'
'As for Lupi, she broke the glass.'

S_{TOPIC}VSO

- SSM does not have any case marking on nouns or subject/object agreement marking on verbs.
- Aspect is marked on verbs through prefixes and tone (Mantenuto & Roberts 2018).
- We propose that SSM has both verbal and adjectival property concepts.² The majority of property concepts are verbal, and it has a small number of adjectival property concepts.
- However, proving that the property concepts are verbs is difficult in SSM, and in other Mixtec varieties (as reported for Chalcatongo Mixtec by Macaulay 1996:85).
- Property concepts in SSM are clearly not nominal.

2.1. Mixtec comparatives

SSM can express comparison with a number of different constructions: mixed conjoined comparatives, mixed locative comparatives, particle comparatives and exceed comparatives. In this section I am going to briefly introduce all of them; however, this talk will focus on the mixed conjoined comparatives.

- *A mixed comparative that has features of both conjoined and morphologically explicit comparison*

(5) Jikó=ka=i , òònjiví mee=nì.
tall=GA=1SG NEG BASE=2SG.HON
'Yo soy más alto que usted.'
'I am taller than you.'

- *A mixed comparative that has features of both locative and morphologically explicit comparison*

Locative comparatives are a monoclausal and the standard of comparison ('you') is introduced by the locative *noo*.

² The term property concept (PC) was created by Thompson (1989). PCs are adjectival in English, but they can be verbal or nominal in other languages.

- (6) Yu'ù jìkó=ka=i nòò mee=ní.
 1SG.IND tall=GA=1SG on BASE=2SG.HON
 'Yo soy más alto que usted.'
 'I am taller than you.'

- *A particle comparative*

To the best of our knowledge particle comparatives are present only in San Sebastián del Monte Mixtec. Moreover, from its distribution among speakers in the town, it seems to be a fairly new addition, as older people do not use it, middle age people use it somewhat and it is more common among younger speakers. This is a monoclausal construction.

- (7) Yu'ù jìkó=ka=i ja mee=ní.
 1SG.IND tall.CONT=GA=1SG than BASE=2SG.HON
 'Yo soy más alto que usted.'
 'I am taller than you.'

- *An exceed comparative*

The exceed comparative is characterized by the use of a transitive verb whose lexical meaning in 'to exceed' or 'to surpass', and whose direct object is the standard of comparison (Stassen 1985).

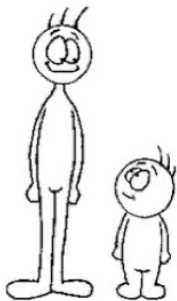
- (8) Niyà'a o ònì libro kà'v-i.
 exceed.COMP LKN three book read.COMP-1SG
 Intended: 'Yo leí más libros que tres.'
 Intended: 'I read more than three books.'

All these constructions (except for the exceed comparative) use a morpheme functioning as a comparative marker, *ga/ka*.

3. Conjoined comparatives - SSM within the typology

A comparison is the mental act by which two objects are assigned a position on a predicative scale. We have a comparison of inequality if the positions of two objects on the scale are different.

A comparative construction is what we use to express the comparison syntactically (Stassen 2013).



Maria *Juan*
 Target/Comparee Standard

(9) Maria is taller than Juan.

Conjoined comparatives are comparatives which use two conjoined clauses to associate the target of comparison and the standard of comparison (Stassen 1985).

- Two structurally independent clauses; one with the comparee NP the other containing the standard NP (Stassen 1985, 2013).
- Two predicates, one per clause (Stassen 1985, 2013).
- Adversative coordination of two clauses; there are two subtypes to express the adversativity syntactically: by means of an antonym (10) or by means of negation (11) (Stassen 1985, 2013).

(10) Ua **loa** lenei va'a , ua **puupu** lena.
Is long this boat is short that
'This boat is longer than that boat.' Samoan (Stassen, 1985: 187)

(11) 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)

Note: none of these sentences presents overt coordination, rather a comma is used orthographically.

An example of a mixed conjoined comparative in SSM is reported in (12).

(12) Jikó=**ka**=ì , òònjiví mee=nì.
tall=GA=1SG NEG BASE=2SG.HON
'Yo soy más alto que usted.'
'I am taller than you.'

- There are two clauses, although no conjunction overtly appears.

(13) Jikó=**ka**=ì (*ti) òònjiví mee=nì.
tall=GA=1SG and NEG BASE=2SG.HON
'Yo soy más alto que usted.'
'I am taller than you.'

- Focus negation (*òònjiví*) introduces the second clause, making these resemble Motu-like conjoined comparatives: *I am tall, you are not*.
- Unlike conjoined comparatives in other languages (Samoan, Washo, Warlpiri), antonyms are not possible in the second clause.

(14) * Jikó=**ka** Maria (ti) kùiti Juan.
tall=GA Maria and short Juan
Intended: 'Maria is tall, Juan is short.'

- (15) Jikó Maria *(ti) kùiti Juan.
 tall Maria and short Juan
 ‘Maria es alta y Juan es bajo.’
 ‘Maria is tall and Juan is short.’
 Speaker’s comment: “But I’m not comparing the two of them.”

- The second clause is understood to contain the same predicate as the first clause, but only the NP surfaces (see Macaulay 1996: 162 for Chalcatongo Mixtec).
- The first conjunct contains a morpheme functioning as a comparative morpheme (*ka*), hence our description of these as “mixed” conjoined/explicit comparatives.

- (16) Jikó=**ka**=ì , òònjiví mee=nì.
 tall=GA=1SG NEG BASE=2SG.HON
 ‘Yo soy más alto que usted.’
 ‘I am taller than you.’

- (17) Jikó=ì , òònjiví mee=nì.
 tall=1SG NEG BASE=2SG.HON
 ‘Yo soy alto, usted no.’
 ‘I am tall, [but] not you.’

Table 1 summarizes the positionality of SSM conjoined comparatives within the typological expectations of conjoined comparatives.

Table 1: Typology summary/comparison

	Consistent with the literature definition of conjoined comparatives	Inconsistent with the literature definition of conjoined comparatives
Two clauses	Two full clauses are present	One clause is present, and for the second clause only the NP surfaces
Two predicates	Second predicate is present	One predicate is overt, the other is understood to be present
Negation	Negation is present	Negation used is a focus negation
Positive predication (unmarked)	Expected	Not included

- There are enough problematic points listed in table 1 so that we need to offer a possible alternative analysis of conjoined comparatives, both syntactically and semantically.

What about the semantic typology of conjoined comparatives?

- Stassen (1985) does not talk about semantics in details, but research has been done on the semantics of conjoined comparatives in more recent years (Beck et al. 2009, Pearson 2010, Bochnak 2015, Bowler 2016, 2020, Hohaus 2018, Reisinger & Lo 2017);
- however, Mixtec (Mantenuto 2020, León Vázquez & Mantenuto 2021), together with Salish (Davis & Mellesmoen 2019), presents an overt comparative morpheme within a conjoined comparison, which needs to be taken into account.
- Moreover, the type of negation seems to play a role in the semantics of SSM conjoined comparatives as well.

We will use SSM as a case study to expand our understanding of conjoined comparatives, by asking the following questions:

1. What is the syntax of conjoined comparatives in SSM?
2. What are the semantic characteristics of conjoined comparatives in SSM?

4. A syntactic analysis of SSM conjoined comparatives

Let's look at the syntax of SSM mixed conjoined comparatives.

- **Negation**

Òònjìvì is a focus negation, and it occurs in contrastive contexts as in (18).

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

But also, in non-contrastive contexts where the element we are asking about is in focus.

- (19) Òònjìvì xità sèen Liya.
 NEG tortilla buy.CONT Liya
 'No es tortilla lo que compra Liya.'
 'Not tortilla is what Liya buys.'

- (20) A òònjìvì tikoò sèen Liya?
 Q NEG tortilla buy.CONT Liya
 'No son tamales los que compró Liya?'
 'Aren't tamales what Liya ate?'

- Moreover, the *òònjìvì* focus negation used in the comparative is distinct from other kinds of negations available in Mixtec.
- For example, in SSM, *koò* is used to negate predicates marked for continuative or completive aspect (21)-(22), while *òòn* is used to negate imperatives and future events marked for potential aspect (23)-(24).

- (21) Koò séen kuà'á=i kui'i.
 NEG.REAL buy.CONT much=1SG fruit
 'No estoy comprando mucha fruta.'
 'I am not buying a lot of fruit.'
- (22) (Koò) ní-sèen kuà'á=i kui'i.
 NEG.REAL NEG.PHRASAL-buy.COMP much=1SG fruit
 'No compré mucha fruta.'
 'I didn't buy a lot of fruit.'
- (23) Òòn kusi kua'='ó³ kui'i.
 NEG.IRR eat.POT much=2SG fruit
 '¡No comas mucha fruta!'
 'Don't eat a lot of fruit!'
- (24) 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.'

- **Two clauses**

Macaulay (1996) points out for Chalcatongo Mixtec that the second clause is understood to contain the same predicate as the first clause, but only the NP surfaces; that is also true in SSM.

- (25) Jikó=ka Pablo , òònjiví Juan.
 tall=GA Pablo NEG Juan
 'Pablo es más alto que Juan.'
 'Pablo is taller than Juan.'

SSM focus is located to the left periphery of the sentence, so whenever an element is in focus it needs to precede the verb. *Òònjiví* is a focus negation, which has always to precede the verb when it occurs in non-comparatives.

- (26) a. Òònjiví manzana sàs=i.
 NEG apple eat.CONT=1SG
 'No es manzana la que comi.'
 'It is not apple what I ate.'
- b. * Sàs=i òònjiví manzana.
 eat.CONT=1SG NEG apple

However, in the comparatives, it is not possible to front the second part of the conjoined negation, the one containing *òònjiví*.

³ The second vowel in a bimoraic word can be elided in fast speech.

- c. *Exceed comparative*
 Juan niyà'a o=rà ivì metro.
 Juan exceed.COMP LKN=3M two meter
 'Juan is taller than 2 meters.'
 'Juan es más alto que 2 metros.'

(33) **Comparison with a quantified DP**

- a. *Mixed conjoined comparative*
 * Kà'vi-kua'a=kà=i , òònjiví òni (libro).
 read.COMP-many=GA=1SG NEG three book
 Intended: 'Yo leí más libros que tres.'
 Intended: 'I read more than three books.'
- b. *Mixed locative comparative*
 * Kà'vi=kà=i , nòò òni (libro).
 read.COMP=GA=1SG on three book
 Intended: 'Yo leí más libros que tres.'
 Intended: 'I read more than three books.' (same comment as before)
- c. *Exceed comparative*
 Niyà'a o òni libro kà'v-i.
 exceed.COMP LKN three book read.COMP-1SG
 Intended: 'Yo leí más libros que tres.'
 Intended: 'I read more than three books.'

- **Two predicates**

We argue that we are dealing with two predicates because of the following points, also related to the kind of negation that is used in SSM.

Òònjiví+NP cannot be a constituent on its own. It cannot stand on its own, not even when replying to a question which has introduced a predicate.

- (34) Q: Nayóó jikó=kà, Pablo a Juan?
 who tall=GA Pablo Q Juan
 '¿Quién más alto, Pablo o Juan?'
 'Who is taller? Pablo or Juan?'
- A: Pablo jikó=kà.
 Pablo tall=GA
 'Pablo es más alto.'
 'Pablo is taller.'
- A': * Òònjiví Juan.
 NEG Juan
 'No Juan.'
 'Not Juan.'

When we have a different kind of predicate, the whole clause occurs. The standard clause of the SSM subcomparative must be nominalized: it occurs as a light-headed relative clause.⁴

- (35) a. Kixi=ka=i , òònjiví ñà-jakua'a=i.
 sleep.CONT=GA=1SG NEG CFR:THING-study.POT=1SG
 ‘Yo duermo más de que voy a estudiar.’
 ‘I will sleep more than I will study.’⁵
- b. Kuju-kua'a=ka=i , òònjiví ñà-jakua'=ó.
 sleep.POT-much=GA=1SG NEG CFR:THING-study.POT=2SG
 ‘Yo voy a dormir más de que vas a estudiar.’
 ‘I will sleep more than you will study.’
- (36) a. Káá ka'ni=kà mesa , òònjiví ña-jikó=tó.
 be.CONT large=GA table NEG CFR:THING-tall=3WOOD
 ‘La mesa está más larga que alta.’
 ‘The table is larger than it is tall.’
- b. Jikó=kà mesa , òònjiví ñà-ndíkà=(kà)
 tall=GA table NEG CFR:THING-wide=GA
 vitiyè'é.
 door
 ‘La mesa es más alta que la puerta es ancha.’
 ‘The table is taller than the door is wide.’

Thus, we take this to mean that stripping has occurred, and that the negated DP has been fronted as it is the focused element, and everything else is elided.

- (37) a. Jikó=ka Pablo , òònjiví jikó Juan.
 tall=GA Pablo NEG tall Juan
- b. Jikó=ka Pablo , [òònjiví Juan] jikó.
 tall=GA Pablo NEG Juan tall
- c. Jikó=ka Pablo , [òònjiví Juan] jikó.
 tall=GA Pablo NEG Juan tall
 ‘Pablo es más alto que Juan.’
 ‘Pablo is taller than Juan.’

⁴ (i) Nóni Charlie ti-jikó.
 hug.CONT Charlie CFR:HUM.M-tall
 ‘Charlie está abrazando a lo que es alto.’
 ‘Charlie is hugging the one (male) who is tall.’

⁵ The order of the conjunct is fixed; however, more work is necessary in order to better understand light headed comparative constructions like the ones reported here (for more preliminary information on this construction see Mantenuto 2020).

(ii) * Òònjiví ñà-jakua'a=i , kixi=ka=i
 NEG CFR:THING-study.POT=1SG sleep.CONT=GA=1SG

Summing up: we can confirm the conjoined nature of comparatives in SSM, but we need to expand the definition of conjoined comparatives as in:

- Two conjoined clauses, where the second clause can undergo ellipsis.
- The two predicates are present, but they do not need to be overt.

5. Locating the semantics of SSM conjoined comparatives

- The conjoined comparative in SSM presents the *ka/ga* morpheme, which looks like it contributes comparative semantics like English *-er/more*. Removing the morpheme makes the comparison impossible.

(38) Jikó=i , òònjiví me=nì.
 tall=1SG NEG BASE=2SG.HON
 ‘Yo soy alto, usted no.’
 ‘I am tall, you are not.’

- Semantically, the SSM mixed conjoined comparatives with *ka/ga* behave like explicit comparatives, in the sense of Kennedy (2007, 2011).

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

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

- they are acceptable with minimum and maximum standard predicates like *nikàvà* ‘curved.’

(39) **Minimum standard (verbal) property concept comparatives**
 Nikàvà=kà barra yó’ò , òònjiví ñà-seèn.
 curve.COMP=GA bar this NEG CFR:THING-that
 ‘Esta barra está más curva que esa.’
 ‘This bar is more curved than that one.’

(40) **Maximum standard (verbal) property concept comparatives**
 Ìityí=kà paño yó’ò , òònjiví ñà-seèn.
 dry=GA bar this NEG CFR:THING-that
 ‘Este rebozo está más seco que eso.’
 ‘This shawl is drier than that one.’

- They are felicitous in crisp judgment contexts, which would be unexpected if the clauses had vague predicates (41).

(41) **Crisp judgment contexts**

Context: I am 180 centimeters tall and you are 179 centimeters tall.

Jikó=ka=i , òònjiví me=nì.
tall=GA=1SG NEG BASE=2SG.HON

‘Yo soy más alto que usted.’

‘I am taller than you.’

- They are felicitous in contexts in which both of the objects being compared fall into either the positive or negative extension of the gradable predicate (42).

(42) **Entailment to positive degree**

Context: Juan is 6’8’’(2 m), Pablo is 7’ (2m10) (i.e., they are both tall people/both fall in the positive extension of “tall”).

a. Jikó=ka Pablo , òònjiví Juan.
tall=GA Pablo NEG Juan

‘Pablo es más alto que Juan.’

‘Pablo is taller than Juan.’ (OK even though Juan is tall)

b. Kùiti=ka Juan , òònjiví Pablo.
short=GA Juan NEG Pablo

‘Juan es más bajo que Pablo.’

‘Juan is shorter than Pablo.’ (OK even though Juan is tall)

- This suggests that the second conjunct of the mixed conjoined comparatives don’t entail that the subject instantiates the property to a positive degree, as we would expect if it were a positive vague predication: It is OK to say ‘Juan is not [tall]’ even though he is 6’8’’.
- Similarly, clauses with *ka/ga* marked predicates do not entail that the subject instantiates the property to a positive degree: It is OK to say ‘Juan is short=*ka*’ even though he is 6’8’’.
- It is impossible to have an evaluative reading (one where Pablo would have to be tall in order to say Pablo is taller than Juan). Pablo can be a short person and we can still say (43).

(43) Context: Juan is 3’9’’(1m20), Pablo is 4’3’’ (1m30).

Jikó=ka Pablo , òònjiví Juan.
tall=GA Pablo NEG Juan

‘Pablo es más alto que Juan.’

‘Pablo is taller than Juan.’ (OK even though Pablo is short)

- The idea that *ka/ga* contributes comparative semantics is further supported by its use in incomplete comparatives (Sheldon 1945)/context comparatives (Hohaus 2015): If we

only have the clause with the comparative marker, and we do not have a second conjunct, the meaning in Mixtec is that of an incomplete/context comparative.

- (44) Jikó=ka Pablo.
tall=GA Pablo
'Pablo es más alto.'
'Pablo is taller [than someone else in the context].'

- These incomplete comparatives are compatible with superlative translations, as demonstrated by the context in ((45)a), although they do not entail superlativity, as demonstrated by the context in ((45)b).
- The context in ((45)c) demonstrates that property concepts combined with *ka* have comparative and not positive meanings.

- (45) a. Context 1: There is a group of tall people, all with different levels of tallness and Pablo is the tallest one. → (44) is acceptable.
b. Context 2: There are 5 people, all of different heights, in the middle range there are Chuchi and Pablo, neither one of which is the tallest in the group, though Pablo is a little taller than Chuchi. → (44) is acceptable.
c. Context 3: Pablo is 190cm tall and Chuchi is 198cm. → (44) is unacceptable.

- As demonstrated by Deal and Hohaus (2019), the presence of the comparative morpheme alone does not mean that we are dealing with a degreeful language. It is known that although other tests have been successfully modeled in a degreeless system (Beck et al. 2009, Pearson 2010, Bochnak 2015, Bowler 2016, 2020, Hohaus 2018, Reisinger & Lo 2017), the existence of differential comparatives is agreed upon as a sufficient condition for a language to be degreeful (von Stechow 1984, Deal and Hohaus 2019).

- (46) **Differential comparatives**
Jikó Liya iin metro=kà , òònjiví Lupe.
tall Liya one meter=GA NEG Lupe
'Liya mide un metro más que Lupe.'
'Liya is one meter taller than Lupe.'
NOT: 'Liya is one meter tall, not Lupe'; this does not entail that Liya is one meter tall.

Additional degree constructions in SSM

- In addition to the presence of the comparative morpheme *ka/ga* in mixed conjoined comparatives, a number of other degree constructions are available in SSM.
- Their availability provides additional evidence that SSM is degreeful language.

- (47) **Verbal property concept intensification**
a. Kuà'á jikó Maria.
much tall Maria
'Yo soy MUY alta.'
'I am VERY tall.'

b. Jikó kuà'á Maria.
tall much Maria
'Maria es muy alta.'
'Maria is very tall.'

c. Jikó ndívà'a Maria.
tall very Maria
'Maria is very tall.'

(48) **Adjectival property concept intensification⁶**

a. Ká'nò ndívà'a Maria.
big.SG very Maria
'Maria es muy grande.'
'Maria is very big.'

b. ??Ká'nò kuà'á Maria.
big.SG much Maria
Intended: 'Maria is very big.'/'Maria es muy grande.'

(49) **Measure phrases**

a. Ìvì métrò jikó Maria.
two meter tall Maria
'Maria es alta 2 metros.'
'Maria is 2 meters tall.'

b. Jikó Maria ìvì métrò.
tall Maria two meter
'Maria es alta 2 metros.'
'Maria is 2 meters tall.'

c. *Jikó ìvì métrò Maria.
tall two meter Maria

(50) **Degree questions**

a. Ndixà (ví) jikó Maria?
how ? tall Maria
'¿Cuánto es alta Maria?'
'How tall is Mary?'

⁶ These intensifiers can also be used to intensify eventive verbal predicates:

- (i) a. Ndá'yi kuà'á Leonardo.
cry.CONT much Leonardo
'Leonardo está llorando mucho.'/'Leonardo is crying a lot.' - "regular a lot" crying
- b. Ndá'yi ndívà'a Leonardo.
cry.CONT very Leonardo
'Leonardo está llorando mucho.'/'Leonardo is crying a lot.' - intense crying non stop

- b. Najaa yusà koni Liya?
 how.much dough want.CONT Liya
 ‘¿Cuánta masa quiere Liya?’
 ‘How much dough does Liya want?’
- c. 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?’

Summing up: we can assert that SSM is a degreeful language, but we need to expand the definition of conjoined comparatives as in:

- Conjoined comparatives don’t correlate with degreelessness given our expanded syntactic understanding of conjoined comparatives

5.1. Towards a semantics working analysis of SSM conjoined comparatives

- In languages like English, gradable adjectives and adverbs contain a degree variable, which is an abstract variable of type $\langle d \rangle$. A gradable predicate introduces a scale and the variable specifies the degree along the scale.

(51) John is taller than Mary.

(52) $[[\text{tall}]] = \lambda d. \lambda x. \text{HEIGHT}(x) \geq d$

- In languages which lack degrees, gradable predicates cannot combine with arguments of type $\langle d \rangle$, rather the gradable predicate will depend on the context (Klein 1980).

(53) ’é:liwlu delkáykayi? k’é?i da?mó?mo?
 t’e:liwlu de-ʔil-kaykay-i? k’-eʔ-i da?mo?mo?
 man nmlz-attr-tall-attr 3-cop-ipfv woman
 delkáykayi?é:s k’áʔaš
 de-ʔil-kaykay-iʔ-e:s k’-eʔ-aʔ-š
 nmlz-attr-tall-attr-neg 3-cop-aor-sr
 ‘The man is taller than the woman.’
 (Literally: ‘The man is tall, the woman is not tall.’) Bochnak (2015:4)

(54) $[[\text{tall}]]^C = \lambda x. x \text{ counts as tall with respect to } C$

- The problem introduced by SSM is that we have been proven it to be a gradable language with a degree variable (like English).

Table 2: evidence that we are dealing with a degree language - typology

	SSM	Washo	English
Minimum standard	yes	no	yes
Crisp judgment contexts	yes	no	yes
Entailment to positive degree	yes	no	yes
Differential comparatives	yes	no	yes

- However, we have this degreeful comparison within a conjoined comparative construction, with a negation.
 - The assumption in the literature is that when we rely on a conjoined comparison strategy then we lack degrees, as in Washo, but this is not the case in SSM.
 - Languages with comparative morphology encode a strictly-greater-than ordering relation on measures, and this seems to be what is happening in SSM.
 - In explicit comparatives with -er-like morphology, the comparison comes from the ordering between degrees that -er contributes.
 - Conjoined comparative assertions of “x is P, y is not P” partition the context such that the boundary between the positive and negative extensions of P falls between x and y. This entails that x is more P than y.
- ➔ In SSM it is not clear what the negation is doing if we have the comparative morpheme doing the ordering. The presence of both negation and comparative morphology seems redundant.

We are now working in trying to find an answer to the following questions:
 How does the semantics of negation play a role in this composition? What is its function?
 How are these conjuncts to compose in order to relate these two DPs and to put them on a gradable scale?

It is worth noting that SSM is not alone, as other understudied languages present the same problem (many varieties of Mixtec (all?) and Salish).

6. Conclusion and open ended questions to push this research agenda forward

In this talk we have offered evidence that SSM has conjoined comparatives which include degrees and thus we have expanded the typological definition of conjoined comparatives to mixed conjoined comparatives.

Although progress has been made towards an understanding of an understudied kind of conjoined comparatives, some questions are still unanswered.

- What is the compositional semantics of mixed conjoined comparatives in SSM?
- Can we come up with a semantics that is able to account for other cases of mixed conjoined comparatives? E.g. Salish, Menominee, etc.?

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Appendix

- The *ka/ga* morpheme can express comparison with a number of different lexical categories, such as adjectives, verbs, and adverbs (plus the ones already listed such as differentials)

(55) Verbal comparatives

- a. Ni-kixi=kà Juan , òònjiví Maria.
 COMP-sleep=GA Juan NEG Maria
 ‘John slept more than Mary.’
 ‘Juan durmió más que Maria.’
- b. Síka=ka=i , òònjiví mee=ní.
 walk.CONT=GA=1SG NEG BASE=2SG.HON
 ‘Yo camino más que usted.’
 ‘I walk more than you.’

(56) Adverbial comparatives

- Chuchi kana kono kama=kà=rà , òònjiví
 Chuchi go.CONT run.CONT fast=GA=3HUM.M NEG
 Liya
 Liya
 ‘Chuchi corre más rápido que Liya.’
 ‘Chuchi runs faster than Liya.’

(57) Attributive comparatives

- Jákákó Liya iin leè jikó=kà , òònjiví Lupe.
 give.birth.CONT Liya one baby tall=GA NEG Lupe
 ‘Liya dió a luz un bebe más alto que Lupe.’
 ‘Liya gave birth to a taller child than Lupe.’
 a. External reading: Liya gave birth to a taller baby than Lupe did.
 b. Internal reading: Liya gave birth to a baby taller than Lupe.

- **Locative comparatives**

Locative comparatives are a monoclausal and the standard of comparison ('you') is introduced by the locative *nòò*.

- (58) Yu'ù jìkó=ka=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 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.

- (59) 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 property concept predicates such as 'tall' (57), 'fat' (58) or 'old' (59), but not with (eventive) verbal predicates like 'eat' (60), 'cook' (61), 'run' (62) or 'write' (63).

- (60) Chika'no=kà=i nòò me=ní.
 fat.COMP=GA=1SG on BASE=2SG.HON
 'Yo soy más gordo que tú.'
 'I am fatter than you.'
- (61) Kaa yata=kà Chuchi nòò Juan.
 be.CONT old=GA Chuchi on Juan
 'Chuchi es mayor que Juan.'
 'Chuchi is older than Juan.'
- (62) # Sisi=ka=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.'
- (63) # Nìchijó=kà=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.'
- (64) # Kánàkónò=kà=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.'

- (65) # Tiaa=kà=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 (64)-(65).

- (66) 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.'

- (67) Tuti kanoó nòò to-sèen=i koni.
 paper be.located.CONT on CFR:WOOD-buy.COMP=1SG 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.

- **Particle comparatives**

To the best of our knowledge particle comparatives are present only in San Sebastián del Monte Mixtec. Moreover, from its distribution among speakers in the town, it seems to be a fairly new addition, as older people do not use it, middle age people use it somewhat and it is more common among younger speakers. This is a monoclausal construction.

- (68) Yu'ù jikó=ka=i ja mee=ni.
 1SG.IND tall.CONT=GA=1SG than BASE=2SG.HON
 'Yo soy más alto que usted.'
 'I am taller than you.'

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. 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 (Mantenuto 2020).

- (69) Kaja chino=yó ndì tiààn ja nindee=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.'

References

- Beck, S., Krasikova, S., Fleischer, D., Gergel, R., Hofstetter, S., Savelsberg, C., Vanderelst, J., and Villalta, E. (2009). Crosslinguistic variation in comparison constructions. *Linguistic Variation Yearbook 2009*, 9:1–66.
- Bochnak, R. (2015). The Degree Semantics Parameter and cross-linguistic variation. *Semantics and Pragmatics*, 8:1–48.
- Bowler, M. (2016). The status of degrees in Warlpiri. In Grubic, M. and Mucha, A., editors, *Proceedings of The Semantics of African, Asian and Austronesian Languages 2*, pages 1–17.
- Bowler, Margit. 2020. “Cross-linguistic variation in conjoined comparatives.” *Sinn und Bedeutung 25*. Handout.
- Davis, H. and Mellesmoen, G. (2019). Degree constructions in two Salish languages. In Reisinger, D. and Mellesmoen, G., editors, *Papers for the International Conference on Salish and Neighbouring Languages*, pages 24–52, Vancouver. UBCWPL.
- Deal, A. and Hohaus, V. (2019). Vague predicates, crisp judgments. In *Proceedings of Sinn und Bedeutung 23*, pages 347–364.
- Hankamer, J., & Sag, I. (1976). Deep and surface anaphora. *Linguistic inquiry*, 7(3), 391–428.
- Hohaus, V. (2015). “Context and composition: how presuppositions manipulate the interpretation of free variables”. [Doctoral dissertation]. Tübingen: Universität Tübingen.
- Josserand, J. K. 1982. *Mixtec dialect history*. [Doctoral dissertation], Tulane University.-check
- Kennedy, C. (1999). *Projecting the Adjective: The Syntax and Semantics of Gradability and Comparison*. Garland, New York.
- Kennedy, C. (2007). Vagueness and grammar: The semantics of relative and absolute gradable adjectives. *Linguistics and Philosophy*, 30(1), 1–45.
- Kennedy, C. (2011). Vagueness and comparison. In P. Egge & N. Klinedinst (Eds.), *Vagueness and Language Use*, 73–97. New York: Palgrave MacMillan.
- Klein, E. (1980). A semantics for positive and comparative adjectives. *Linguistics and Philosophy*, 4(1):1–46.
- Krifka, M. (1998). Additive particles under stress. *Semantics and Linguistic Theory*, 8, 111–128.
- McCawley, J. D. (1991). Contrastive negation and metalinguistic negation. In *Chicago Linguistic Society 27(2)*:189–206).
- Macaulay, M. (1996). *A grammar of Chalcatongo Mixtec*. Los Angeles: University of California Press.
- Mantenuto, I. (Forthcoming). Comparatives in San Sebastián del Monte Mixtec: a Mixed Construction. *Proceedings of the West Coast Conference in Formal Linguistics 2020 (WCCFL38)*. Cascadilla Press.
- Mantenuto, I. (2020). “‘Other’ and ‘More’ in San Sebastián del Monte Mixtec and Beyond”. [Doctoral dissertation]. University of California, Los Angeles.
- Mantenuto, I. & Roberts, B. (2018). The morphophonology of aspect in San Sebastián del Monte Mixtec [Talk]. The Society for the Study of the Indigenous Languages of the Americas (SSILA 2018), Salt Lake City, Utah.
- Pearson, H. (2010). How to do comparison in a language without degrees: a semantics for the comparative in Fijian. In Prinzhorn, M., Schmitt, V., and Zobel, S., editors, *Proceedings of Sinn und Bedeutung 14*, pages 356–372.
- Rensch, C. R. (1976). *Comparative Otomanguean phonology*. Bloomington: Indiana University.
- Reisinger, D. and Lo, R. (2017). PayPajuT@m: A degreeless language. In Anghelescu,

- A., Fry, M., Huijsmans, M., and Reisinger, D., editors, *Proceedings of the International Conference on Salish and Neighbouring Languages 52*, pages 225–243.
- Sheldon, E. K. (1945). The rise of the incomplete comparative. *American Speech* 20(3):161–167.
- Stassen, L. (1985). *Comparison and Universal Grammar*. Basil Blackwell.
- Stassen, L. (2013). Comparative constructions. In Dryer, M. and Haspelmath, M., editors, *The World Atlas of Language Structures Online*. Max Planck Institute for Evolutionary Anthropology, Leipzig.
- Thompson, S. (1989). A discourse approach to the cross-linguistic category ‘adjective’.
In Corrigan, R., Eckman, F., and Noonan, M., editors, *Linguistic Categorization*, pages 245–265. John Benjamins, Amsterdam.
- von Stechow, A. (1984). Comparing semantic theories of comparison. *Journal of Semantics*, 3:1–77.