Decomposing negative indefinites in San Martín Peras Mixtec

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Abstract: this paper explores a class of positionally-restricted negative quantifiers in San Martín Peras Mixtec, arguing that they are composed of the marker of sentence negation and a moved, non-negative indefinite. This project provides two empirical contributions: first, it extends the typologically rare phenomenon of positionally-restricted negative quantifiers from Germanic to Oto-Manguean. Second, it is the first in-depth analysis of such a construction in a Mixtec language and might serve to unite disparate analyses of similar phenomena across the language group.¹

Keywords: negative indefinites, negation, negative licensing, Mixtec.

1 Introduction

In the study of negative indefinites — nominal expressions that contribute semantic negation to their utterance — one promising strand of research has focused on a typologically rare but theoretically interesting phenomenon. Some negative indefinites (NIs) may only occur in the linear position usually occupied by negation. These are famously found in Scandinavian languages and originally described by Christensen (1986). For example, in Icelandic, the words meaning nobody and nothing are ungrammatical if they occur anywhere other than the usual linear position of sentential negation. Though objects in Icelandic usually occur post-verbally, ekkert below must appear where the marker of negation usually does:

(1) Icelandic
   a. *Jón hefur getað lesið ekkert
      John has could read nothing
      Intended: “John hasn’t been able to read anything.”
   
   b. Jón hefur ekkert getað lesið
      John has nothing could read
      “John hasn’t been able to read anything.” (Rögnvaldsson, 1987: p. 7)

Positionally-restricted NIs like these are typologically rare and theoretically important, as they have been used to argue for a syntactic relationship between negation and negative quantifiers. However, they have only been described in Germanic languages, specifically Scandinavian languages (Christensen, 1986; Rögnvaldsson, 1987; Sells, 2000, among others) and West Flemish (Haegeman and Zanuttini, 1991; Haegeman and Lohndal, 2010).

In this paper, I examine positionally-restricted NIs in a completely unrelated language, San Martín Peras Mixtec (SMPM), a VSO, Oto-Manguean language of Oaxaca, Mexico. Like in Scandinavian, NIs in SMPM can only occur in the position where sentential negation is expressed, which is obligatorily pre-verbal. If they surface in the canonical object position, they are ungrammatical.

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The basic proposal advanced here is that positionally-restricted NIs in SMPM are not atomic nominal expressions with a positional licensing requirement. Instead, they are the result of movement of an indefinite to a position right-adjacent to the marker of sentence negation, after which negation cliticizes onto the indefinite. This analysis serves not only to extend the empirical range of positionally-restricted NIs from Germanic to Oto-Manguean, but also to serve as a basis to unite varying analyses of similar constructions across Mixtec languages.

These NIs in SMPM mirror constructions in other Mixtec languages, which have received brief and disparate analytical treatment. In Silacayoapan Mixtec, for example, (Shields, 1988, p.388) describes a variety of negative quantifiers that occur mainly sentence-initially and are headed by a xuú, a negative nominal marker that may have been derived from a negative version of the verb kakuu, meaning “to be.” (Alexander, 1980, p.29-31) describes that in Atatláhuca Mixtec, the subject can sometimes intervene between the sentence-initial marker of sentential negation and the verb. (de Hollenbach, 2013, p.116-122) shows similar facts for Magdalena Peñasco Mixtec, where the sentence-initial marker of sentential negation on verbs seems to be able to combine with a nominal element to mean “nothing” or “no one,” though in other cases the same negative marker in isolation has the meaning “there is not.” She hypothesizes that this negative marker might derive from an older verb meaning “there isn’t.” Finally, for Alacatlatzala Mixtec, (Zylstra, 2012, p. 69) says that constructions similar to SMPM’s NIs are negative existentials: koo is a verb meaning “there isn’t,” which takes a nominal subject. These analyses showcase the ubiquity of this type of construction across Mixtec languages, but they also highlight the variance and brevity of their analytical treatment. Some state that they are positionally-restricted negative nominal expressions, others that they might be some combination of a marker of negation and a nominal, and still others that they are negative existential verbs which take a pivot and a relative clause.

In §2, I argue NIs in SMPM are actually made up of two separate items — the marker of sentence negation and a non-negative indefinite. In §3, I walk through negative morphology and demonstrate that the same morphological process (with some quirks) is active in all expressions of sentential negation, including the formation of NIs. In §4, I conclude.

2 Decomposing NIs

Positionally restricted NIs in SMPM, which I term kó-NPs, occur the linear position where sentence negation is usually expressed. They cannot surface in situ.

(3) a. kó-ña yíbi káni Pedro _
   NEG-3.SG.NEU person hit.CONT Pedro _
   “Pedro isn’t hitting anybody” or “Nobody is hitting Pedro.”

2Unless otherwise noted, all SMPM data in this paper has been gathered through my own fieldwork with a native speaker who lives and works in Watsonville, California.
b. *káni kô:-ña yîbi Pebro
hit.CONT NEG-3PL.NEUT person Pedro
Intended: “Nobody is hitting Pedro.”

c. *káni Pebro kô:-ña yîbi
hit.CONT Pedro NEG-3PL.NEUT person
Intended: “Pedro isn’t hitting anybody.”

What is more, ko-NPs cannot co-occur with the marker of sentence negation.

(4) kô:-ña yîbi (*ko)-káni Pebro
NEG-3.SG.NEUT person NEG-hit.CONT Pedro
“Pedro isn’t hitting anybody” or “Nobody is hitting Pedro.”

These characteristics separate ko-NPs from other fronted nominals. For example, NEG-words in the language can surface either in situ or fronted, and they always co-occur with the marker of sentential negation.

(5)

a. ko-káni Pebro nî’ín-na
NEG-hit.CONT Pedro not-one-3PL.NEUT
“Pedro isn’t hitting anybody.”

b. nî’ín-na ko-káni Pebro
not-one-3PL.NEUT NEG-hit.CONT Pedro
“Pedro isn’t hitting anybody” or “Nobody is hitting Pedro.”

The central questions raised by ko-NPs are twofold: first, why is the fronting of ko-NPs to the linear position of sentence negation obligatory? Second, why can ko-NPs not co-occur with the marker of sentential negation?

2.1 Proposal

I propose that ko-NPs are not atomic nominal projections that move to a position local to NegP. Instead, ko-NPs are the result of optional movement of a non-negative indefinite to a position right-adjacent to the negative marker, after which negation cliticizes onto the indefinite to form a ko-NP3.

(6) kô:-na
NEG-3PL.NEUT
“Nobody.”

3 Symbols for tone are H = high, M = mid, L = low, R = rising contour
There are three crucial ingredients to this proposal: first, *ko*-NPs are composed of sentence negation and a non-negative indefinite. That is, the *ko*-NPs are not merged as single items but instead are derivationally formed of two independent parts. Second, negation and the moved indefinite compose via the same morphological process by which negation maps onto other items in the language—the indefinite occurs right-adjacent to the negative head, and the negative morpheme cliticizes onto it. The third piece of this proposal is that the way that these two units come to be adjacent is through optional indefinite movement. That it is the indefinite that is moving, and that this movement is optional, can be transparently seen in (7), where a non-negative indefinite in situ expresses the same meaning as a parallel *ko*-NP construction.4

(7) a. kō:-ña  yíbi  ní-shini  Pebro  
   NEG-3SG.NEUT person  COMPL-see Pedro  
   “Pedro didn’t see anyone”  

b. ko-ní-shini  Pébrero  ña  yíbi  
   NEG-NEG.COMPL-see Pedro  3SG.NEUT person  
   “Pedro didn’t see anyone” (¬ > ∃)  
   *“Pedro didn’t see someone” (∃ > ¬)

Under this proposal pursued here, the puzzles regarding *ko*-NPs are explained: they cannot co-occur with negation because they contain negation, and they can only occur in the position of negation because they are formed only when an indefinite moves to the position of negation.

In this section, I give support for the first piece of this proposal—that *ko*-NPs are composed of sentence negation and a non-negative indefinite—by arguing for the following points: *ko*-NPs contain an overt spell-out of the NEG-head, share the same distributional characteristics as the NEG-head, and contribute sentential negation. In §4, I will walk through the morphological process that combines negation and the indefinite. The third piece of the proposal, namely that optional indefinite movement brings the two pieces of *ko*-NPs together, is not one that I cover in depth here.

### 2.2 Negative morphology

*ko*-NPs appear to contain an overt spell-out of the negative morpheme. However, in order to see this, it is first necessary to understand the varied morphological realization of sentence negation in SMPM. The negative marker varies depending on the aspect of the verb.5 Continuative verbs are negated by the prefix *ko*-. Completive verbs are negated by a tonally modified Completive prefix -nt as well as an optional *ko*-. Finally, Potential verbs are negated solely by a mid-to-high rising tone.

(8) Negative Marking

<table>
<thead>
<tr>
<th>Verb</th>
<th>CONT</th>
<th>COMPL</th>
<th>POT</th>
</tr>
</thead>
<tbody>
<tr>
<td>“to paint”</td>
<td>ko-náka’yì</td>
<td>ko-ní-naka’yì</td>
<td>náká’yì</td>
</tr>
<tr>
<td>“to rot”</td>
<td>ko-zyá’yì</td>
<td>ko-ní-zya’yì</td>
<td>zyá’yì</td>
</tr>
</tbody>
</table>

4The difference in vowel lengths here is due to a morphological process.
5Most Mesoamerican languages are described as having Continuative, Completive, and Potential aspects. Though SMPM appears to not quite fit this mold, I stick with the usual terminology.
Though a more thorough morphological analysis will come is §4, it suffices for now to note that negation in SMPM appears to be an instance of multiple exponence (Matthews, 1974), where one meaning is expressed in multiple forms. Continuative verbs are negated by ko-, Potential verbs are negated by a rising tone, and Completive verbs are negated by a combination of the two. It suffices to state here that negation in SMPM is a single NEG-head that is made up of ko- and a mid-to-high contour tone, which map via a somewhat opaque process onto verbs depending on aspect.

Under the hypothesis that ko-NPs are formed of an indefinite and the negative morpheme, it is no coincidence that all ko-NPs begin with the prefix ko-, with either a long or short vowel, as well as with a mid-to-high rising tone (9). This fact is consistent with an analysis of the negative marker as a combination of ko- and a floating mid-to-high rising tone.

(9) a. kō:-na
   NEG-3PL.NEUT
   “Nobody.”

   b. ko-ńa’á
      NEG-thing
      “Nothing.”

2.3 Distributional restrictions

Aside from containing a spell-out of the NEG-head, ko-NPs also share a distributional restriction with the NEG-head—sentence negation can be expressed only once in a sentence. This constraint can be seen at work the various ways in which sentential negation can be expressed in SMPM. There is a certain class of adverbs that usually occur pre-verbally in affirmative contexts.

(10) mı’ı shínu Pebro
     strong run.CONT Pebro
     “Pedro runs quickly”

There are two ways to negate sentences containing these adverbs. In the first, negation may appear on the verb, with the adverb appearing post-verbally. Alternatively, negation can map onto the pre-verbal adverb in the form of a rising tone, the same process that occurs with Potential verbs.

(11) ko-shínu mı’ı Pebro
     NEG-run.CONT strong Pedro
     “Pedro does not run quickly”

(12) mı’ı shínu Pebro
     NEG.strong run.CONT Pedro
     “Pedro does not run fast.”

Both negated adverbs and negated verbs contribute sentential negation, suggesting that they both contain some exponent of the negative morpheme. This fact can be used to show us that one and only one item in a sentence may host the marker of sentential negation: when one item hosts negation, the other cannot:

(13) a. *mı’ı ko-shínu Pebro
     NEG-strong NEG-run.CONT Pedro
     Intended: “Pedro doesn’t run fast.”

   b. *ko-shínu mı’ı Pebro
      NEG-run.CONT NEG.strong Pedro
      Intended: “Pedro runs fast.”

The lack of co-occurrence between negated adverbs and negated verbs suggests that one of these two items may host the negative morpheme, but not both. This is important because it makes
a prediction: if ko-NPs contain sentence negation, then they should not be able to co-occur with any other exponent of sentential negation. In fact, this prediction is borne out.

(14) a. *kō:-na ko-káni Pebro  
\[\text{NEG-them NEG-hit}.\text{CONT Pedro}\]  
“Pedro isn’t hitting anybody” or “Nobody is hitting Pedro”
b. *kō:-na ni’i ní-shinu  
\[\text{NEG-3.PL. NEUT NEG-fast COMPL-run}\]  
Intended: “Nobody runs fast” or “Nobody doesn’t run fast”
c. *kō:-na ko-ñá’ā kísha  
\[\text{NEG-3.PL. NEUT NEG-thing do}.\text{CONT}\]  
Intended: “Nobody is doing anything”

2.4 Negative licensing

If ko-NPs contain the NEG-head, then all polarity-sensitive items licensed by sentence negation should be licensed by ko-NPs. We will see that this is indeed the case, as evidenced by polarity-sensitive degree words and responses, as well as NEG-words.

2.4.1 Polarity-sensitive intensifier

SMPM has a polarity-sensitive degree word timi:(-ba), which may only occur immediately following items that contain the negative marker. It is illicit in positive polarity contexts.

(15) a. ko-nˇı-shahku (✓ timi:-ba) Pebro (*timi:-ba)  
\[\text{NEG-COMPL-laugh (at.all-PART) Pebro (at.all-PART)}\]  
“Pedro isn’t laughing (at all).”
b. nzyˇe: (✓ timi:) sháhku (*timi:) Pebro  
\[\text{NEG.strong (at.all) laugh}.\text{CONT Pedro}\]  
“Pedro isn’t laughing hard (at all).”
c. nì-shàhkù (*timi:(-ba)) Pebro  
\[\text{COMPL-laugh at.all-PART Pebro}\]  
“Pedro laughed (*at all)”

The distribution of timi:(-ba) seen here supports the generalization that it may only occur immediately following an item bearing the negative marker. This polarity-sensitive degree word is grammatical immediately following ko-NPs, suggesting that they contain the negative marker.

(16) ko-ñá’ā (timi:-ba) kísha Pebro  
\[\text{NEG-thing (at.all-PART) do}.\text{CONT Pebro}\]  
“Pedro doesn’t do anything (at all).”

2.4.2 Polarity-sensitive responses

Certain responses in SMPM are sensitive the polarity of the preceding sentence, similar to facts outlined for English in Klima (1964). Much like in English, positive polarity sentences in SMPM can be responded to by saying the equivalent of “Me, too,” but not “Me, neither.” Negative sentences can be felicitously responded to with, “Me, neither” but not “Me, too.” Importantly, sentences containing ko-NPs can be responded to by saying “Me, neither,” the response compatible only with
negative polarity sentences. It is infelicitous to reply to *ko*-NPs sentences with “Me, too.”

(17) Statement  (18) Response

kō-ː-na ní-shashi nzihkā  a. #sá ti-ːi
NEG-3.PL.NEUT COMPL-eat banana  so also-1SG
“Nobody ate a banana”  “Me, too.”

b. √ ní yu’u
not 1SG
“Me, neither.”

This evidence suggests that *ko*-NPs contribute sentential negation to sentences in which they occur, which is consistent with an analysis of *ko*-NPs compositionally containing the negative morpheme.

2.4.3 *ni*-NPs

As mentioned previously, *ni*-NPs obligatorily co-occur with the negative marker, and they are ungrammatical in its absence. These *NEG*-words can appear before or after the negative particle.

(19) a. ní-ːˈĩ-ːna ko-káni Pebro
not-one-3PL.NEUT NEG-hit.CONT Pedro
“Pedro isn’t hitting anybody” or “Nobody is hitting Pedro”

b. ko-káni Pebro ní-ːˈĩ-ːna
NEG-hit.CONT Pedro not-one-3PL.NEUT
“Pedro isn’t hitting anybody”

*ní*-NPs are also licensed by and can precede pre-verbal negated adverbs.

(20) ní-ːˈĩ-ːna níˈi ni-shinu
not-one-3.PL.NEUT NEG.strong COMPL-run
“Nobody ran quickly.”

The generalization, then, is that *ni*-NPs are licensed by items that host sentence negation — negated verbs and negated pre-verbal adverbs. Additionally, when they front, they precede the negated item. *ko*-NPs license the appearance of *ni*-NPs, and the fronted *ni*-NPs occur before the *ko*-NP—the reverse order is ungrammatical. This licensing of *ni*-NPs is also consistent with an analysis in which *ko*-NPs contain the negative marker.

(21) a. ko-ŋ̂a-ː kísha níˈi-ːna
NEG-thing do.CONT not-one-3.PL.NEUT
“Nobody is doing anything”

b. ní-ːˈĩ-ːna ko-ŋ̂a-ː kísha
no-one-3.PL.NEUT NEG-thing do.CONT
“Nobody is doing anything”

c. *ko-ŋ̂a-ː níˈi-ːna
go one-3.PL.NEUT do.CONT
Intended: “Nobody is doing anything.”

*ko*-NPs license all of the polarity-sensitive items that negated verbs and adverbs do: polarity-sensitive degree words, polarity-sensitive responses, and *ni*-NPs. Additionally, polarity-sensitive
items interact syntactically with ko-NPs in the same way they do with negation—negative intensifiers immediately follow them, and fronted ni-NPs have to precede them. When taken together with the morphological form of ko-NPs and their distributional restrictions, these facts suggest that ko-NPs contribute sentential negation, contain the negative morpheme, and that they occur in the same position or a position local to negation.

3 Negative morphology

So far, I have claimed that ko-NPs are made up of the negative morpheme and a non-negative indefinite. In this section, I examine the morphological process of ko-NP formation, arguing that negation is a clitic that adjoins to a right-adjacent, moved indefinite. First, I establish negation’s clitic status, and then I follow with a deeper examination of negative morphology. Only when these two facts are clear can ko-NPs be easily understood as the result of sentence negation cliticizing onto a moved indefinite.

3.1 Negation as a clitic

Recall that the negative morpheme—a combination of ko and a floating rising contour tone—may map onto either the verb or a pre-verbal adverb, but not both.

\[
\text{(22) a. } \text{ko}-\text{shínu } \text{ni’i} \text{ Pedro} \\
\text{NEG-run.CONT strong Pedro} \\
\text{“Pedro doesn’t run fast.”} \\
\text{b. } \text{ni’i} \text{ shínu } \text{Pedro} \\
\text{NEG.strong run.CONT Pedro} \\
\text{“Pedro doesn’t run fast.”} \\
\text{c. } *\text{ni’i } \text{ko}-\text{shínu } \text{Pedro} \\
\text{NEG-strong NEG-run.CONT Pedro} \\
\text{Intended: “Pedro doesn’t run fast.”}
\]

The ability of the negative morpheme map onto either adverbs or the verb falls out from an analysis of the negative morpheme as a clitic that adjoins to whatever item appears immediately after it at PF. Crucially, an independently-motivated vP-fronting derivation of VSO word order (see Eischens (2019) for a detailed analysis) means that the item immediately following NEG, which I propose to occur between CP and TP, is a vP containing both the adverb and the verb. The important fact to note is that either the vP-internal adverb or the verb itself will immediately follow NEG, and NEG is not overly particular about what type of item it maps onto—it will attach to whatever item immediately follows it at PF.

\[
\text{(23) Negated adverb} \\
\text{NEG TP[ vP[ Adv V ] S O ]} \\
\text{(24) Negated verb} \\
\text{NEG TP[ vP[ V Adv ] S O ]}
\]

The negative morpheme leans on whatever material occurs right-adjacent to it, whether that be the verb or a vP-level adverb. I interpret this relative promiscuity of attachment as evidence that negation in SMPM is a clitic. We will see that negation interacts with indefinites in this same way, creating ko-NPs. The indefinite moves to a position right-adjacent to negation, and, because it is
immediately right-adjacent to negation, the negative morpheme cliticizes onto it. This derivation is repeated below:

The hypothesis that negation cliticizes onto a moved indefinite makes the prediction that the morphological characteristics of this cliticization should remain constant between verbs, adverbs, and nominals. While some characteristics of the negative morpheme change in rather unpredictable ways between these classes of items, others remain constant and suggest that the same cliticization process is at play.

3.2 The morphology of negation

In §3.2, I gave an overview of the morphology of the NEG-head, claiming that is an instance of multiple exponence, where multiple, sometimes co-occurring forms—the prefix ko- and a floating, mid-to-high contour tone—are both exponents of the same negative morpheme, and they map via a somewhat opaque process onto verbs. The sources of uncertainty in this morphological procedure are found on two fronts: the presence or absence of ko-, and the surface realization of negation’s contour tone. While the factors that determine the presence or absence of ko- are somewhat uncertain, we have sufficient data to formulate a hypothesis about the morphological behavior of the negation’s tone.

The tonal portion of the negative morpheme in SMPM is an instance of grammatical tone, defined in Rolle (2018) as “a tonological operation that is not general across the phonological grammar, and is restricted to the context of a specific morpheme or construction” (p. 1). In other words, grammatical tone refers to tonal operations that are not phonological in nature but instead are the exponent of some morpheme. In SMPM, grammatical tone is active both in aspect marking and in negation.

Continuative and Completive aspects are minimally expressed tonally: a high tone for Continuative, and a low tone for Completive. Some Completive verbs lexically select a Completive allomorph ni-, which usually takes low tone but sometimes varies. Potential verbs, on the other hand, do not display a consistent tone of the first syllable of the verb. They simply maintain the underlying lexical tone of the verb, as evidenced by the unpredictability of the tone on their first syllable.
(25) Aspect Marking

<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>“to paint”</td>
<td>náka’yí</td>
<td>náka’yí</td>
<td>naka’yí</td>
</tr>
<tr>
<td>“to rot”</td>
<td>zyá’yí</td>
<td>ni-zyá’yí</td>
<td>zyá’yí</td>
</tr>
<tr>
<td>“to laugh”</td>
<td>sháhku</td>
<td>ni-sháhku</td>
<td>kwáhku</td>
</tr>
</tbody>
</table>

From (25), we can conclude that Continuative marking is accomplished via grammatical tone: the Continuative morpheme is a floating high tone that docks onto the left edge of the verb stem. In (26), we see that the low tone associated with the first syllable of verb stem zyá’yí is overwritten by the grammatical tone of Continuative aspect. A solid line represents a mapping from tone to syllable, and a dotted line represents a mapping from tone to syllable that is not realized on the surface because it has been blocked or overwritten.

(26) zyá’yí
rot.CONT

CONT

H L MH
\[\text{zyá’yi}\]

Sentence negation in SMPM also involves a grammatical tone process. One of the exponents of negation in SMPM is a dominant grammatical contour tone that overwrites the tone of its target. This process can be seen most clearly on Completive and Potential verbs, where a mid-to-high contour tone is present at the left edge of the negated verb.

(27) Negative Marking

Negated Potential verbs have a mid-to-high tonal contour on the first syllable of the stem, and negated Completive verbs have a mid-to-high contour on the Completive marker ni-. Negative grammatical tone’s dominant characteristic can be seen in its interaction with Potential verbs, Completive verbs, and adverbs. For example, it overwrites the lexical tone associated with the first syllable of Potential verbs and adverbs.

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6ni- is lexically selected in affirmative contexts, but interestingly, it is obligatory under negation.
The generalization that negative tone overwrites the tone of its target is fairly robust and can be seen in negative Potential verbs, negative Completive verbs, and negative adverbs. However, Continuative verbs do not have a mid-to-high contour on the first syllable of the stem. Instead, the high tone of Continuative aspect is maintained, and the mid-to-high contour appears to be spread across the first two syllables.

The reason for the lack of a mid-to-high contour on the first syllable of negated Continuative verbs stems from the special status of grammatical tone in SMPM. In order to map onto the first syllable of the verb, the negative contour tone would have to overwrite the grammatical Continuative high tone. While Continuative, Completive, and negative grammatical tones overwrite the tone associated with their target, but there are certain classes of items in SMPM that are indomitable with respect to tonological operations, meaning that their tone cannot be overwritten or replaced by another grammatical tone operation (Rolle, 2018, p. 70). Similar phenomena have been described for Tommo So (McPherson and Heath, 2016) and Jita (Downing, 2014), among others, where a dominant grammatical tone fails to overwrite the tone of a small class of targets. It appears that Continuative grammatical tone is one of these indomitable items, which block otherwise productive tonological processes.

The behavior of the negative grammatical tone extends to ko-NPs, suggesting that the same morphological process is at play. In this section, I examine in detail the most common and unmarked ko-NPs: ko-ñá’ã (‘nothing’), kõ:-na (‘nobody’), and kõ:-ña yíbi (‘nobody’). Sentence negation’s grammatical tone overwrites the tone on its target in some ko-NPs: the high tone on the first syllable of the noun ñá’ã, meaning ‘thing,’ is overwritten by the negative contour tone to form the ko-NP ko-ñá’ã.

### 3.3 Extension to ko-NPs

The behavior of the negative grammatical tone extends to ko-NPs, suggesting that the same morphological process is at play. In this section, I examine in detail the most common and unmarked ko-NPs: ko-ñá’ã (‘nothing’), kõ:-na (‘nobody’), and kõ:-ña yíbi (‘nobody’). Sentence negation’s grammatical tone overwrites the tone on its target in some ko-NPs: the high tone on the first syllable of the noun ñá’ã, meaning ‘thing,’ is overwritten by the negative contour tone to form the ko-NP ko-ñá’ã.
However, something curious happens in the \textit{ko-NP} meaning ‘no one.’ In this context, the vowel of \textit{ko-} is lengthened, and it hosts the contour tone.

The lengthening of \textit{ko-} and its hosting of the negative grammatical tone is unexpected given the verbal paradigm, but it is not surprising. It appears that pronouns in SMPM, of which \textit{nà} is one, are indomitable to grammatical tone processes. This indomitability is functionally motivated: many pronouns are distinguished from each other only by tone. For example, the \textit{nà} pronoun we see in \textit{kò:-na} is a third person plural pronoun for the neutral noun class, but \textit{ná} is the third person plural pronoun for the human feminine noun class (Ostrove, 2018). Overwriting the tone of these pronouns would erase this distinction and result in ambiguity.

A puzzle still remains, though: instead of simply going unrealized, the negative contour tone in \textit{kò:-na} is exponed on \textit{ko-} under what looks like a reassignment:

\begin{tabular}{|c|c|c|}
\hline
\textbf{Blocked mapping} & \textbf{Reassignment} \\
\hline
\textbf{NEG} & \textbf{NEG} \\
\hline
\textbf{M} & \textbf{M} \\
\textbf{MH} & \textbf{MH} \\
\textbf{L} & \textbf{L} \\
\hline
\textit{ko-} & \textit{ko:-} \\
\textit{na} & \textit{na} \\
\hline
\end{tabular}

This process of apparent grammatical tone reassignment is not unattested crosslinguistically. For example, (McPherson and Heath, 2016, p. 623) describe a similar process in Tommo So, where a grammatical floating tone associated with a morpheme is blocked from mapping onto an indomitable target, and as a result, it can dock onto the morpheme that triggered it in the first place. But even if the reassignment of floating tone is an attested process, there are SMPM-internal issues to address, too: if negative grammatical tone is reassigned when it fails to map onto pronouns, why is it not also reassigned when it fails to map onto Continuative verbs?

I propose that the difference between negated Continuative verbs and \textit{ko-NPs} boils down to a tone sandhi process. Hedding (2019) describes a process by which a rising tone followed by a high tone flattens. So, in negated Continuative verbs, negative tone is blocked by Continuative high tone and is reassigned to \textit{ko-}. However, because the rising tone is followed immediately by Continuative high tone, it flattens. In \textit{ko-NPs}, the post-\textit{ko} syllable does not have a high tone and tone flattening

\footnote{\textit{nà} surfaces with a mid tone here, but this is the result of tone sandhi—low tones that follow high tones in a prosodic word are raised to mid.}
does not take place. In this case, negative grammatical tone is exponed on \textit{ko-}, which lengthens to host both its lexically-assigned mid tone as well as the mid-to-high negative contour tone.\footnote{While this is somewhat stipulative, I propose that negative tone does not overwrite \textit{ko-}'s mid tone because it is mapping onto \textit{ko-} as a sort of last resort.}

<table>
<thead>
<tr>
<th>Reassignment in \textit{ko-NP}</th>
<th>Reassignment in CONT verb</th>
</tr>
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<tbody>
<tr>
<td>\text{NEG} \begin{tabular}{c</td>
<td>c</td>
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</tbody>
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Following reassignment of grammatical tone to \textit{ko-} in Continuative verbs, the contour tone flattens to a mid tone. While it is somewhat stipulative, I propose that \textit{ko-} does not lengthen in this case because the tone reassigned to it is identical to its pre-assigned lexical tone.\footnote{This stipulation depends on \textit{ko-}'s lengthening elsewhere occurring after tonal reassignment occurs.}

\begin{equation}
(34) \quad \text{Tone flattening} \quad k\ddot{o}\text{-zyá’yi} \rightarrow \text{ko-zyá’yi}
\end{equation}

The data presented in this section show that negation is a clitic—it maps onto whatever item occurs PF-adjacent to it, whether that item is a verb or an adverb. Extending negation’s status as a clitic to \textit{ko-NPs}, we can conclude that \textit{ko-NPs} are formed by the same morphological process.\footnote{While my analysis accounts for semantically bleached \textit{ko-NPs}, there are some apparent \textit{ko-NPs} that behave differently.}

That is, negation simply cliticizes onto the moved indefinite. While the presence or absence of \textit{ko-} remains to be explained, the behavior of the negative grammatical tone shows us that the same morphological process is taking place in negated verbs, adverbs, and indefinites.

4 Conclusion

Extending the somewhat small empirical domain of positionally-restricted NIs from Germanic to Oto-Manguean gives us a new perspective on the relationship between negation and positionally-restricted NIs. In Germanic, these NIs are usually assumed to be a single unit that undergoes obligatory movement to \textit{NEG} (Rögnvaldsson, 1987; Sells, 2000; Svenonius, 2002; Haegeman and Zanuttini, 1991). In SMPM, these constructions appear to be made up of two pieces: the marker of

(i) a. kō:-shitā nǐ-shishi Pedro \text{NEG-tortilla COMPL-eat} Pedro
   “Pedro didn’t eat any tortillas!”

b. kō:-pastél shísh-i \text{NEG-cake eat} \text{CONT-1SG}
   “I’m not eating cake!”

These apparent \textit{ko-NPs} are different in three ways from the semantically bleached ones discussed above: first, they embed semantically contentful nouns, like ‘cake’ and ‘tortilla,’ as opposed to highly generic nouns like ‘thing’ and ‘person.’ Second, these constructions are restricted to corrective focus contexts. The third way in which the constructions in (i) differ from basic \textit{ko-NPs} is that the negative contour tone does not overwrite the tone on the first syllable of the noun. Instead, the tone remains on \textit{ko-}. The only way to account for these facts is to propose that nouns as a natural class are indomitable to grammatical tone processes, which is certainly stipulative.
sentence negation and a moved, non-negative indefinite. While the details of the movement operation in SMPM are not explored in depth here, it is optional (7), suggesting that it is not driven by a categorical grammatical requirement. Such an analysis might, with some modification, extend to Scandinavian and West Flemish, serving to shed light on the disparate analyses of similar phenomena in these languages.

Another empirical advancement of this project is the potential to unify disparate analyses of similar constructions in various Mixtec languages. However, the analysis proposed by Zylstra (2012) for similar constructions for Alacatlatzala Mixtec (AM) runs counter to the one argued for here. Zylstra proposes that analogous structures in AM are actually the combination of negative existential verb and in indefinite pivot, oftentimes followed by a coda. This proposal is not tenable for SMPM — if kó:- were a negative existential verb, then we would expect it to behave like other existential verbs. However, it behaves differently with respect to wh-extraction. Wh-extraction out of the coda of a positive existential verb is ungrammatical:

(35) *yo: íyo-na káni
   who there.is-3PL.NEUT hit.COMPL
   *“Who is there someone that hit __?”

If ko-NPs were in fact negative existential verbs with a pivot and a coda, we would expect the same restriction to hold of them — wh-words should not grammatically extract over ko-NPs. However, we do see that wh-extraction over a ko-NP is grammatical:

(36) yo: kó:-na káni?
    who NEG-3PL.NEUT hit.CONT
    “Who hit nobody” or “Who did nobody hit?”
    Reading under NEG-existential analysis: *“Who is there no one that hit __?”

The fact that wh-extraction is grammatical in (36), but not in (35), suggests that different structures are at play. The wh-word in (36) is not moving out of the coda of an existential verb, but rather is moving in a mono-clausal domain. These facts set ko-NPs apart from existential constructions in SMPM. If my analysis extends to other Mixtec languages, then similar investigations of Alacatlatzala Mixtec should have the same result. However, I leave this question to future research.

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