Clausal Negation as Raising in San Dionisio Ocotepec Zapotec
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1 Introduction

San Dionisio Ocotepec Zapotec (hereafter SDZ) is an Otomanguean language spoken in Oaxaca, Mexico. SDZ has VSO as its main word order.¹

1) Û-zìì’ Juáàny tòby xhùmbrèjl. VSO
com-buy Juan a hat
‘Juan bought a hat.’

*Û-zìì’ tòby xhùmbrèjl Juáàny. *VOS
com-buy a hat Juan

In addition to this word order, SDZ also has several word orders in which some constituent precedes the verb. In one variant, a constituent precedes the verb and there is a coreferential resumptive clitic pronoun on the verb. I will call this the form of the sentence one with an external topic (e-topic). For expository purposes I will translate it into English with left dislocation, without claiming that the syntax of the SDZ e-topic is precisely that of the English construction.

2) Juáàny û-zì’í=by tòby xhùmbrèjl. e-topic
‘Juan, he bought a hat.’

In a second variant, a constituent precedes the verb, but there is no resumptive pronoun. I will label this form of the sentence one with an internal prominent

¹ SDZ is an Otomanguean language spoken in San Dionisio Ocotpep, Oaxaca, Mexico by 2,000 - 3,000 people. Special thanks to Luisa Martinez, who provided all the SDZ data.

The orthography for SDZ is adapted from the practical orthographies for other Zapotec languages spoken in the Valley of Oaxaca. In the SDZ orthography symbols have their usual phonetic values, with the following exceptions. <x> = /ʃ/ before a vowel and /ʃ/ before a consonant, <xh> = /ʃ/ before back vowels, <qu> = /k/ before front vowels, and <rr> = trilled /r/. Doubled vowels are long. SDZ is a language with four contrastive phonation types: breathy <Vj>, creaky <V’V>, checked <V’>, and plain <V’>.

Glosses use the following abbreviations: a=animal, aff=affirmative, cer=certainty, com=completive aspect, con=continuative aspect, cs=causative, def=definite future aspect, dem=demonstrative, foc=focus, hab=habitual aspect, neg=negative, p=possessed, plur=plural, pot=potential aspect, q=question, r=respect, ref=reflexive, rel=relative, stat=stative aspect, top=topic.
constituent (i-prom).

3) **Juáñy **ù-zii’ tòby xhùmbrèjl. i-prom
   ‘Juan bought a hat/It was Juan who bought a hat.’

   The element in i-prom position is often the focus of the sentence, but focus
doesn’t seem to be the only possible discourse function associated with this
position. Other linguists working on Zapotec, e.g. Lee (1999), Black (2000) have
called this the focus position. This may very well be correct in other Zapotec
languages, but it does not seem to be correct for SDZ. In some examples, it
appears to be simply be the subject. Consider these examples, where the subjects
of meteorological and idiomatic verbs appear in the i-prom position with no
special discourse context.

4) Cà-ni’ gùzi’w
   con-speak thunder
   ‘It is thundering.’

   ✓Gùzi’w cá-ni’ i-prom
   * Gùzi’w cá-ni’=nì e-topic

5) Nù’ú tó’p ìícy Juáñy.
   exist white:hair head Juan
   ‘Juan has white hair.’

   ✓Tó’p nù’ú ìícy Juáñy. i-prom
   white:hair exist head Juan

In this cases, the element in the i-prom position hardly seems to be new
information. It is nor is it easy to see how ‘thunder’ is understood to contrast with
a presupposition that something else is speaking or that 'white hair' exists on
John's head in contrast to other things.

We also see cases where the phrase in the i-prom position shows properties
more typically associated with topics.

6) Q: ¿Xhiì ù-zii’ Móøny?
    what com-buy Ramón
‘What did Ramón buy?’

✓ A: Móøny ù-zii’ tôby liibrr.
   Ramón com-buy a book

✓ A: Tôby liibrr ù-zii’ Móøny.
   a book com-buy Ramón

#A: Ù-zii’ Móøny tôby liibrr.
   com-buy Ramón a book
   ‘Ramón bought a book.’

In this first answer to this question, Móøny appears in the i-prom position. The definition of topic and focus is controversial (Lambrecht 1994, Polinsky 1999, and others), but on nearly all definitions, a constituent X is a focus if the sentence containing X is a felicitous response to a question that replaces X with an interrogative.

I have argued in Broadwell (2001, 2005a) that the overall organization of the clause SDZ is as follows:
In this structure, we can see that there is a class of manner adverbials which adjoins to S. The position of this adverb is very useful in identifying the left edge of the S constituent. Another point about this structure is that main verbs usually show up in the V position. In most clauses, the Infl position is not overtly filled, but I will argue in section 5 below that verbs in the definite future appear here.

Manner adverbs may appear after the i-prom position, unlike other adverbs. They may not appear before the i-prom position.

7) Ngângá’ ù-dàw bè’cw bè’l. Adv3 V
quickly com-eat dog meat
‘The dog ate the meat quickly.’

*Ngåŋǻ’ bè’cw ù-dày bè’l. *Adv, i-prom V
quickly dog com-eat meat

Bè’cw ngåŋǻ’ ù-dày bè’l. ✓i-prom Adv, V
dog quickly com-eat meat

2 Aspects

Most SDZ verbs are preceded by one of seven possible aspect markers. The most frequent allomorphs of these aspect markers are shown below, but there is a significant degree of irregularity in the aspect marking system.

8) completive ù-/bì-
continuative cå(y)-
habitual rr-/r-
potential gi-/gù-/i-
definite future s-/z-
eutral na-/n-
negative ni-/ny-

The completive, continuative, habitual, potential, and definite future aspect markers are shown for the following fairly regular verb /-ù'l/d/ ‘to sing’:

9) Bi-ù'l=dì ‘S/he sang.’
com-sing=3

Cåy-ù'l=dì ‘S/he is singing.’
con-sing=3

R-ù'l=dì ‘S/he sings.’
hab-sing=3

Gú-ù'l=dì ‘S/he will sing.’
pot-sing=3
Some stative and/or adjectival predicates also appear in the neutral aspect:

10) Ná-biéjz xòòb.
    neu-dry  corn
    ‘The corn is dry.'

The negative aspect does not typically appear in a main clause, but only in the complement to a predicate of negation:

11) Ííty Juáñy ny-ù'ld
    not Juan  neg-sing
    ‘Juan didn't sing.'

Munro and Lopez (1999) and Lee (1999) have shown that the negative and potential aspects show many common properties which justify grouping them together as the modal aspects. The other aspects are referred to as non-modal aspects.

An important property of the modal aspects for this talk is that many verbs require modal aspect on their complement. (These verbs are largely comparable to those that take infinitival complements in English.) The most usual pattern is for the complement to occur in the potential aspect, shifting to the negative aspect when the matrix is in the completive. This pattern is summarized as follows:

12) Matrix verb Complement verb
    completive aspect negative aspect
    other aspects potential aspect

Here are some examples of this pattern with the verb *rr-cà'z* ‘to want':
We can see that the potential functions in embedded clauses in a manner like an infinitive in language such as English or Spanish. The negative aspect functions in the same way, but refers to events in the past.

3 Negation

3.1 Negation with non-modal complements

Sentential negation is shown with the negative (qu)ííty plus either i.) a verb in with a non-modal complement (completive, continuative, or habitual aspect) + the clitic =ti on the following word/constituent or ii.) a verb in a modal aspect (negative or potential).²

The word order for sentences with negation depends on the aspect of the negated verb. If the negated verb is in a non-modal aspect, then the negative (qu)ííty normally precedes the verb, and the verb has a clitic =ti ‘negative’:

15) Ííty ù-lù’ù=ti’ Juáànì bzyàá lè’èny bòòls.
    neg com-put=neg Juan beans in bag
    ‘Juan didn't put the beans in the bag.’

16) Ííty cá-yà’á=ti’ Mâríí.
    neg con-dance=neg Maria
    ‘Maria isn't dancing.’

It is also possible to have a phrase between (qu)ííty and the verb, and in this case, the clitic =ti’ follows this phrase. The phrase after (qu)ííty is interpreted as focused:

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² The initial /k/ of negative (qu)ííty is omitted when word-initial, and since this predicate does not show normal aspect inflection, it is almost always unprefixed. Only when (qu)ííty is preceded by a clitic does the /k/ surface.
I’d like to argue that the two possibilities for finite complements following \(qi\)iity correspond to two different ways of expanding IP, and that in the sentences above, the focused element is in the same i-prom position identified earlier.

As for the =ti’ clitic, I would like to suggest that it appears in the Infl head position of the following clause, but it then cliticizes to the end of the following word or phrase, whether that is the i-prom or the verb. Thus the structure is as follows:

In this structure, the complement of \(qi\)iity is an IP which comes with its i-prom position. Note also that the material after Infl is an XP, so both NP and PP may appear here. One additional proviso – \(qi\)iity is not a verb by standard
morphological tests in SDZ; I have shown it under a V node in this tree diagram for the sake of simplicity, but so far as I can see, nothing crucial rests on the label in the tree.

3.2 Negation with modal complements

If the complement of *(qu)iity is modal (negative or potential), then we see a rather different pattern. No =ti’ clitic appears, and now the subject of the verb must appear after *(qu)iity:

20) Íity Juáñy ni-gù’ bzyáá le’eny bòòls.
   neg Juan neg-put beans in bag
   ‘Juan didn't put the beans in the bag.’

21) Íity Màríí gi-yà’.
    neg Maria pot-dance
    ‘Maria won't dance.’

*Íity gi-yà’ Màríí.

22) Íity Màríí ni-yà’á.
    neg Maria neg-dance
    ‘Maria didn't dance.’

*Íity ni-yà’á Màríí.

23) Íity réé=bííny ùnàà ny-èèd.
    not pl-people female neg-come
    ‘The women didn't come.’

*Íity ny-èèd réé=bííny ùnàà.

Unlike the modal complements, non-modal complements don’t allow us to focus a non-subject argument to a position after the negation:
24) íity María ní-yàw bzyàá.
eg María neg-eat beans
‘Maria didn’t eat the beans.’

*íity bzyàá ní-yàw María.
eg beans neg-eat Maria

25) íity Juan ní-gù’ bzyàá lè’ény bòòls.
eg Juan neg-put beans in bag
‘Juan didn't put the beans in the bag.’

*íity lè’ény bòòls ní-gù’ Juan bzyàá
neg in bag neg-put Juan beans

To emphasize a constituent other than the subject, it is necessary to switch to a non-modal complement:

26) íity bzyàá-tì’ ù-dàw María
neg beans=neg com-eat Maria
‘Maria didn't eat the beans (FOCUS).’

I will argue here that the correct structure for negation with a modal complement is as follows:

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S
  /\  
 V  NP
 /\  
SUBJ S
 /\ 
íity V (NP)
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Note that in contrast to the non-modal negation, the modal negation takes an S as its complement. The NP that follows the negation is necessarily the subject of
both íity and the following verb, and thus objects or PPs cannot appear between the two verbs.

4 Negation as raising
4.1 Comparison to English

These facts are complex and perhaps hard to understand. But I will argue that many of them find explanation if we think of (qu)íity as a kind of raising predicate, with a range of possibilities like seem or appear in English. Consider sentences like the following:

27) It seems [that Mary went to Oaxaca].
    Mary seemed [to go to Oaxaca]

In the first example, seem takes a clausal complement which includes its subject. In the second, it takes an infinitival complement, and the subject of seem is the logical subject of the following infinitive.

Compare the following two SDZ sentences:

28) Íity [lù-ù’ù=tì' Juáàny bzyàá lè'èny bòòls]. non-modal complement
    neg com-put=neg Juan beans in bag
    ‘Juan didn't put the beans in the bag.'

29) Íity Juáàny [s nì-gù' bzyàá lè'èny bòòls]. modal complement
    neg Juan neg-put beans in bag
    ‘Juan didn't put the beans in the bag.'

(Qu)íity is not a verb in SDZ, but it otherwise shares many properties with raising verbs. It takes two types of complements. The non-modal complement includes its subject, and participates in structures comparable to It seems that Mary went to Oaxaca. The modal complement is missing its subject, which appears as the subject of the higher predicate.

Thus despite the superficial differences between Zapotec negation and English raising verbs, there is a deeper similarity between the two constructions. The essence of raising is a shared subject between two adjacent predicates, and SDZ negation involves a subject-sharing construction, albeit of a less familiar
variety.

4.2 Idioms, raising, and negation

Just as in English, idiomatic subjects may undergo raising to the subject of the negative predicate. There are a number of idiomatic constructions in SDZ where an experiencer subject appears as the possessor of the noun lòò 'face':

30) Rr-tù-ì̀-nééy lòò Màríì liiız=ní'.
    hab-shame-app face Maria house=3ref
    ‘Maria is ashamed of her house.'
    (lit. 'Maria's face is shamed with her house.')

31) Rr-chìgá’ lòò Màríí liiız-à.
    hab-surprise face Maria house-1s
    ‘Maria is surprised by my house.'
    (lit. 'Maria's face is surprised (at) my house.')

The idiomatic subjects persist when raised to become subject of negative raising predicate:

32) Íìty lòò Màrió i-tù-ìy- nééy liiız=ní'.
    neg face Maria pot-shame-app house=3ref
    ‘Maria won't be ashamed of her house.'

33) Íìty lòò Màrió i-chìgá’ liiız-à
    neg face Maria pot-surprise house-1s
    ‘My house won't surprise Maria'

Meteorological subjects like 'rain' also raise in the negative:

34) Íìty niisgiì ni-yàjìb.
    neg rain neg-fall.
    ‘It didn't rain.'
4.3 Other raising predicates in SDZ

While SDZ does not have raising verbs corresponding to 'seem', 'appear', or other members of this semantic category, it does have other predicates with a raising syntax similar to that shown by *qu(ííty)*. An examination of such verbs shows that the aspect of the complement is lexically specified by the semantics of the raising predicate. *Rr-zàlòò* 'begin' is a raising verb which selects a continuative complement.

35) Ù-zàlòò   Juáñy cày-û'ld.
    com-begin Juan  con-sing
    ‘Juan began to sing.’

36) Ù-zàlòò    niisgìì cá-yàjb.
    com-begin rain  con-fall
    ‘It began to rain.’

*Cààdy* 'still not' is another raising predicate, and it requires potential aspect on its complement.

37) Cáàdy    Màríí    cùà'    gèèt.
    still:not Maria  pot:throw  tortillas
    ‘Maria still doesn't make tortillas.’

Thus *qu(ííty)* appears to be a member of a small set of raising predicates in the language and the elements associated with raising include both verbs like *rr-zàlòò* 'begin' and non-verbal predicates like *qu(ííty)* 'not' and *cààdy* 'not yet'.

5 The definite future and its interaction with negation

5.1 The definite future

The analysis above is strengthened by the interaction of negation and the definite future. SDZ, like other Valley Zapotec languages, has two different aspects which are translated into the future in English/Spanish. The definite future is marked with *s*- or *z*;- the potential has a number of allomorphs, the most common of which is *g*:-
The difference between these two is subtle and Lee (1999) has done the most careful investigation of the semantics. The names of the definite future reflects its use with future events that are more certain and also perhaps closer in time. The potential is appropriate with a wider range of future events and shows less of a speaker commitment to the certainty or proximity of the event.

Despite the close semantics, verbs in the potential and future aspects show strikingly different syntactic properties, and most of these properties follow from the assumption that a verb in the definite appears in the Infl position, while a verb in the potential remains in the ordinary V position. Evidence for this is discussed in the following sections.

5.2 Lack of i-prom in the definite future

As previously argued, SDZ has a preverbal i-prom position for elements which bear a discourse function such as TOPIC or FOCUS. This i-prom position is not possible when the verb is in the definite future aspect (s-/z-). In contrast, this position is possible when the verb is in the potential aspect.

40) S-àw báád bèld yù’ù.
def-eat duck  snake  earth
‘The duck is going to eat a worm.’

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3 I have given a somewhat simplified account of the syntax of the definite future. See Broadwell (2007) for more detail. My analysis is influenced by Lee (1999), in which San Lucas Quiaviní Zapotec verbs in the definite future move into [Spec, FocP].

4 In Broadwell (2002), I call this the internal prominence (i-prom) position, to distinguish it from a CP-joined position for external topics (e-topic). In that paper, I also give more detailed argumentation for the multiple discourse roles of elements that occupy the i-prom position.
5.3 Manner adverbs and the definite future

Manner adverbs (Adv\textsubscript{Manner}) must not precede a verb in the definite future, though these adverbs may precede a verb in other aspects.

42) Diáp g-ú’ld Màrii. ✓ Adv\textsubscript{Manner} & Potential
   strongly pot-sing Maria
   ‘Maria will sing strongly/loudly.’

*Diáp s-ù’ld Màrii. ✓ Adv\textsubscript{Manner} & Definite Future
   strongly def-sing Maria

S-ù’ld Màrii diáp.
   def-sing Maria strongly

G-ù’ld Màrii diáp.
   def-sing Maria strongly

Pursuing this latter approach, the examples above will have the following (simplified) representations.\textsuperscript{5}

\textsuperscript{5} For expository purposes, the trees shown in this figure show potential positions for focused and adverbial positions in parentheses. The excluded positions in the definite future are shown with strike-out to emphasize their unavailability.
These trees show that when the verb is in the definite future aspect, it appears in the Infl position, and the i-prom and manner adverb positions are excluded. (See Broadwell 2007 for an account of this effect.)

5.4 The definite future and negation

The syntactic structure just posited for negation also accounts for an otherwise puzzling restriction on aspect and the definite future. While both potential and definite future are available in the affirmative, the definite future is ungrammatical in the negative:

43) *Ííty s-âw=tì' báád bèld yù'ù.
    neg pot-eat=neg duck snake earth
    (‘The duck is not going to eat a worm.’)

The potential is good, and shows the usual negation structure for a modal

44) Ííty báád g-àw' bèld yù'ù.
    neg duck pot-eat snake earth
    ‘The duck is not going to eat a worm.’

We can account for the ungrammaticality of the definite future in the negative as
follows—when a non-modal aspect appears on the complement of (qu)iity, the
Infl of the complement clause must contain the clitic =ti’. However, a verb in
the definite future must also appear in Infl, and the demands of the negation and
the definite future are incompatible with each other—a single Infl node cannot
contain both these elements.

6 Conclusion

An analysis of negation as a raising predicate in San Dionisio Ocotepec
Zapotec correctly accounts for a number of facts about word-order, clitics, and
aspect marking in the language, and expands our understanding of raising
predicates more generally.

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