

1996

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Recommended Citation

Camacho, José and Sánchez, Liliana (1996) "Three Types of Conjunction," *North East Linguistics Society*.
Vol. 26 , Article 4.

Available at: <https://scholarworks.umass.edu/nels/vol26/iss1/4>

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Three Types of Conjunction*

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0. Introduction

Although the literature on conjunction (see Partee and Rooth, 1983) has recognized different readings of NP conjunctions, it has tried to derive those readings as cases of lexical ambiguity of the conjunction. In this paper, we provide evidence from a language (Southern Quechua) which correlates different meanings in conjunctions with different conjoining words and, most importantly, with syntactically different properties for each of them. We will argue that these differences can be accounted for if each conjunction coordinates different levels of sentential structure.

1. Syntactic Distribution

Southern Quechua has three morphemes that have been identified in the literature (Cusihuamán 1970, Calvo Pérez 1993) as conjunctions: **-wan**, **-pas** and **-nti**. They do not alternate freely, as we will see below.

1.1. Noun Phrases

All three of them can be used to coordinate subjects (see (1)-(3))¹. However, whereas **-wan** and **-pas** can coordinate objects (see (4)-(5)), and indirect objects (see (7)-(8)), as well, **-nti** cannot (see (6) and (9)):

*Thanks to Joseph Aoun, Peter Muysken, Barry Schein and Ellen Thoinpson for discussion and comments. Satuco Orozco, Irma E. de Paredes and Charo Rodríguez Osorio have kindly provided us with judgements for which we are very grateful. All errors remain ours.

¹Based on examples from Calvo Pérez 1993. Judgments have been confirmed by native speakers.

Subjects²:

- (1) [Warmi-kuna-**pas** qhari-kuna-**pas**] llaqta-man puri-rqa-nku
[Woman-pl-conj man-pl-conj] town-dat walk-past-3pl
'Women as well as men marched towards the town.'
- (2) [Warmi-kuna-**wan** qhari-kuna-**wan**] llaqta-man puri-rqa-nku
[Woman-pl-conj man-pl-conj] town-dat walk-past-3pl
'Women and men marched (in separate groups) towards the town.'
- (3) [Warmi-kuna-**ntin** qhari-kuna-**ntin**] llaqta-man puri-rqa-nku
[Woman-pl-conj man-pl-conj] town-dat walk-past-3pl
'Women and men marched (collectively) towards the town.'

Objects:

- (4) [T'anta-ta-**pas** , aycha-ta-**pas**] apa-mu-rqa-nku
[Bread-acc-conj, meat-acc-conj] take-dir-past-3pl
'(They) brought bread as well as meat.'
- (5) [T'anta-ta-**wan** , aycha-ta-**wan**] apa-mu-rqa-nku
[Bread-acc-conj, meat-acc-conj] take-dir-past-3pl
'(They) brought bread and meat (in separate bulks).'
- (6) *[T'anta-ta-**nti** , aycha-ta-**nti**] apa-mu-rqa-nku
[Bread-acc-conj, meat-acc-conj] take-dir-past-3pl
'(They) brought bread and meat (collectively).'

Indirect Objects:

- (7) [Waqcha-kuna-man-**pas** qapaq-kuna-man-**pas**] qulqi-ta qu-ru-nku
[Poor-pl-dat-conj rich-pl-dat-conj] money-acc give-past-3p
'(They) gave the money to the poor as well as to the rich.'
- (8) ?[Waqcha-kuna-man-**wan** qapaq-kuna-man-**wan**] qulqi-ta qu-ru-nku
[Poor-pl-dat-conj rich-pl-dat-conj] money-acc give-past-3p
'(They) gave the money to the poor and the rich (as two separate groups).'
- (9) *[Waqcha-kuna-man-**nti** qapaq-kuna-man-**nti**] qulqi-ta qu-ru-nku
[Poor-pl-dat-conj rich-pl-dat-conj] money-acc give-past-3p
'(They) gave the money to the poor and the rich (collectively).'

²The first occurrence of the morpheme is optional in several sub-varieties of Southern Quechua.

In the literature on Quechua, it is argued that *-nti* cannot appear with animates, however, this does not seem to be the case, as example (3) shows. Rather, the primary asymmetry seems to be subject/non-subject. However, as we will see below, the animate/inanimate distinction does seem to play a role which so far remains obscure.

1.2. Coordination of VPs

Of the three conjunction morphemes, only *-pas* can be used to coordinate VPs, as shown in the following examples:

- (10) Phista-pi [tusu-ni-pas, upya-ni-pas] (From Cerrón- Palomino 1994)
Party-at [dance-1p-conj, drink-1p-conj]
'At the party I dance and drink.'
- (11) *Phista-pi [tusu-ni-wan, upya-ni-wan]
Party-at [dance-1p-conj, drink-1p-conj]
'At the party I dance and drink.'
- (12) *Phista-pi [tusu-ni-nti, upya-ni-nti]
Party-at [dance-1p-conj, drink-1p-conj]
'At the party I dance and drink.'

1.3 Coordination and Aspect

All three conjunctions can appear with non stative predicates³, as the examples below indicate:

- (13) Wiraqucha-kuna-pas yana-kuna-pas llaqta-man puri-rqa-nku
Lord-pl-conj servant-pl-conj town-towards go-past-3pl
'The lords and the servants marched towards the town.'
- (14) Wiraqucha-kuna-wan yana-kuna-wan llaqta-man puri-rqa-nku
Lord-pl-conj servant-pl-conj town-towards go-past-3pl
'The lords and the servants marched towards the town.'
- (15) Wiraqucha-kuna yana-kuna-ntin llaqta-man puri-rqa-nku
Lord-pl servant-pl-conj town-towards go-past-3pl
'The lords and the servants marched towards the town.'

³Ellen Thompson brought up to our attention the issue of whether the relevant distinction is stativity or telicity, as we first had argued. At this point we do not have the relevant data to decide whether a predicate like 'march towards the town' is telic or atelic in Southern Quechua, so we have taken it to be atelic, as it seems to be crosslinguistically.

However, only **-wan** and **-pas** can appear with stative predicates, whereas **-nti** is ungrammatical in these cases:

- (16) Wasi-y wasi-yki **-pas** sumaq ka-nku
House-1p house-2sg-conj beautiful be-3pl
'My house and your house also are beautiful.'
- (17) Wasi-y wasi-yki **-wan** sumaq ka-nku
House-1sg house-2sg-and beautiful be-3pl
'My house and your house are beautiful.'
- (18) *Wasi-y wasi-yki **-nti** sumaq ka-nku
House-1SG house-2SG-and beautiful be-3PL
'My house and your house are beautiful.'

1.4. Interpretation

The conjunction **-nti** has a reading which we will call collective. Thus, the NP's must be understood either participating in the same event, or participating at the same time in two closely related events. However, it is not possible to interpret the NP's conjoined with **-nti** as participating in two completely separate events, as the translation for (20b)⁴ shows:

- (19) Iskay pachaq-lla-man chaya-ra-yku qhari-ntin warmikuna-ntin
Two hundred-lim-dat arrive-past-1p excl man-conj women-conj
'(We) reached almost two hundred between men and women.'
- (20) a. Juan Maria-ntin wawata q'epi-nku
Juan Maria-conj baby carry-3pl
'Juan and Maria carry the baby.'
- b. *Juan Maria-ntin wawata q'epi-nku
Juan Maria-conj baby carry-3pl
'Juan and Maria each carry the baby.'

The conjunction **-wan**, on the other hand, forces a quasi-distributive reading. Thus, the following example is interpreted reciprocally, namely as 'the fox and the bird each talk to the other', but that sentence lacks any overt reciprocal, unlike a regular reciprocal sentence, which would have a reciprocal morpheme on the verb:

⁴If the object is inanimate in (20a), it can be plural, if it is animate, as in our example, it cannot be plural. The nature of this difference is still unclear to us, and deserves further research.

- (21) Atuq-wan wallata-wan rima-nku
 Fox-conj wallata conj speak-3pl
 'The fox and the wallata each talk to the other.'

Finally, the conjunction *-pas* entails what has been called a sum reading. It is interpreted as involving two separate events. For this reason, it is the conjunction used to coordinate different sentences, as seen in example (22) from Valderrama and Escalante 1982. The other two conjunctions are not possible across sentences:

- (22) Kiki-lla-n-manta wañuy-ta qallari-q uywa-nku-pas. Chayman chakra-nku-ta-pas
 chikchi q'asa-pu-q.
 Self-lim-3p-abl die-acc begin-ag cattle-3p-conj. Then field-3p-acc-conj
 frost crush-mov-ag
 'On the one hand the animals started to die by themselves. On the other hand the frost crushed the fields'

-pas, however, cannot coordinate subjects inside causative complements:

- (23) *Hanpiq waminka-kuna-ta-pas runa-kuna-ta-pas baña-rqa-chi-n
 Doctor soldier-pl--acc-conj man-pl-acc-conj bathe-past-caus-3p
 'The doctor made the soldiers and the civilians bathe.'

To summarize the distribution we have established in the previous sections, 1) *-nti* forces a collective reading, it can only go with subjects, and it requires non-stative predicates. 2) *-wan* has a distributive reading, it has no apparent syntactic restrictions. 3) *-pas* has an eventive reading, it can conjoin all sorts of arguments except inside causatives, and it is used to coordinate sentences.

2. Analysis

We have established that the semantic interpretation of one of the conjunctions, *-nti* correlates with a syntactic distribution, namely, it cannot appear with non-subjects and it cannot appear with statives. This clearly cannot be a case of lexical ambiguity, but rather a consequence of different syntactic structures. The structure for the sentence we will be adopting is the one in (24). It includes the more or less standard projection of TP, as well as two Agr projections⁵, a layered VP shell, (see Larson 1988, although our interpretation is more along the lines of Hale and Keyser 1993 and Chomsky 1995), at least for certain transitive verbs. For the interpretation of distributivity, we will argue along with Beghelli and Stowell (1995)'s original proposal for Distributive Phrase, where distributive arguments are interpreted.

⁵Although the existence of Agreement projections has recently been challenged by Chomsky (see Chomsky 1995), this does not affect the bulk of our analysis.

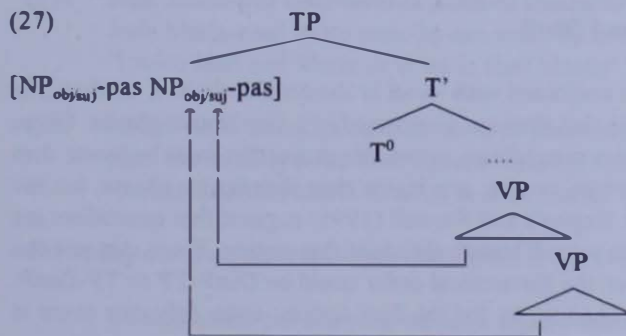
In this example, all that is stated is that there was a marching towards the town by women and a marching towards town by men, they may have been happened at different periods of time. Furthermore, the only possible interpretation is one in which men and women did not march together. Multiple events are necessary with *-pas* even when direct objects and indirect objects are conjoined. Additionally, *-pas* is not restricted to any particular type of argument, unlike *-nti*, which cannot conjoin objects, as seen earlier.

Additionally, *-wan* is the conjunction used to conjoin VP's:

- (26) Chaski chaya-rqa-n-pas kuti-pu-rqa-n-(pu)-pas
 Messenger arrive-past-3sg-conj return-refl-past-3p-conj
 'The messenger arrived and left.'

This conjunction arguably entails two separate events. In particular, in this example, the very meaning of the predicates entails that the most natural interpretation is as separate events⁶.

Suppose, then, that the fact that *-pas* forces a reading involving separate events on the conjoined arguments means that these arguments must be interpreted in the specifier of tense. One possible execution of this idea is adopting Chomsky (1995)'s feature checking theory. Thus, the conjunction would have a temporal feature that needs to be checked. Note that the possibility of having two conjunctions, each attached to one of the arguments suggests that two features might be checked against the tense feature in TP. This latter feature is interpretable, and therefore does not delete after checking⁷. In this way, we obtain the necessary eventive interpretation for the arguments. The structure would be the following:



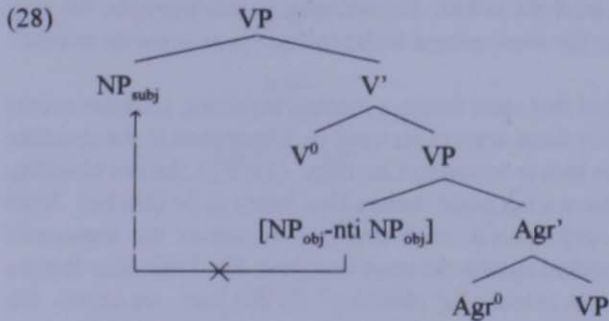
⁶If this analysis is on the right track, it entails that causative complements do not involve separate events, given that their subjects cannot be conjoined with *-pas*.

⁷We will not go into the internal structure of the conjoined NP's. See Camacho (forthcoming) for details, and Collins 1988, Munn 1993 among others for alternative views.

2.2. The Conjunction *-nti* and AspP

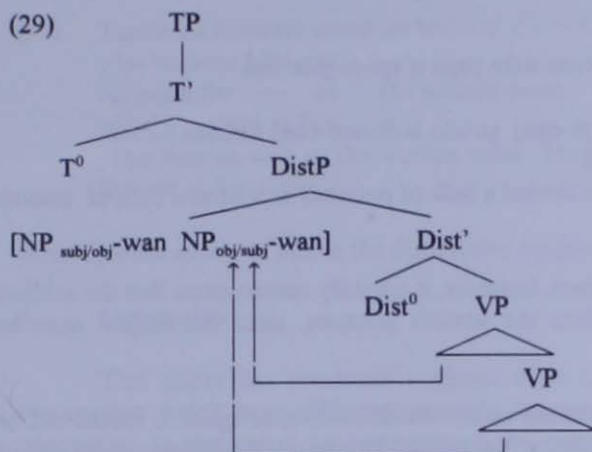
The evidence provided in section 1 shows that *-nti* cannot appear with stative verbs but they are possible with non stative verbs. We have assumed that stativity is checked in the outer VP shell. Additionally, *-nti* cannot coordinate objects or indirect objects, it can only coordinate subjects. Finally, coordination with *-nti* is interpreted collectively.

Suppose that *-nti* is marked for aspect, given that it can only appear with non stative verbs. This means that it must be checked in the higher VP projection, the locus for aspect. For this reason it will only be able to appear with subjects, since only subjects are generated in this projection. This accounts for why non subjects cannot appear with *-nti*: if they did, they would have to be generated in the specifier of the higher VP, but this position is already occupied by the subject:



2.3. The Conjunction *-wan* and DistP

The interpretation of NP's conjoined with *-wan* is always distributive, as shown in section 1. We will take this to mean that they are interpreted in a distributive phrase. Given that objects are possible, there are two possibilities, either this projection must be lower than AgrO, and interpretation must be *in situ*, or else, it is higher than distributive phrase, but the interpretation is done by movement. Beghelli and Stowell (1995) suggest that quantifiers are interpreted in DistP by movement, so we will tentatively adopt that option. Since subjects can also be interpreted distributively, then the hierarchical order could be DistP-TP or TP-DistP. The interpretations we have described argue for the first option, since only one event is involved. The corresponding structure would be the following:



2.4. Nominalizations

Complement clauses in Quechua are nominalizations. Within a nominalization, **-nti** is ungrammatical, even in subject position, but both **-wan** and **-pas** are possible:

- (30) Juan Maria-**wan** qilqa-na-n-ta muna-ni kuadernu-n-pi
 Juan Maria-**conj** write-nom-3p-acc want-1p notebook-pl-loc
 'I want Juan and Maria to write in their blocks'
- (31) Juan Maria-**pas** qilqa-na-n-ta muna-ni kuadernu-n-pi
 Juan Maria-**conj** write-nom-3p-acc want-1p notebook-pl-loc
 'I want Juan and Maria to write in their blocks'
- (32) *Juan Maria-**nti** qilqa-na-n-ta muna-ni kuadernu-n-pi
 Juan Maria-**conj** write-nom-3p-acc want-1p notebook-pl-loc
 'I want Juan and Maria to write in their blocks'

Following our analysis, this entails that aspect is not available in the nominalized sentence.

To summarize the analysis, we have argued that the asymmetry between **-nti** on the one hand and **-wan** and **-pas** on the other derives from the fact that the aspectual properties of the verb, which **-nti** must match, are assigned to the higher VP projection. Since subjects are generated in the specifier of that position, it follows that only subjects may appear with **-nti**.

3. Predictions

When more than two arguments are coordinated in a single sentence, certain scopal readings are predicted to be possible under the analysis presented here, whereas others should be absent. The first case is one where the subject is collective and the object is eventive:

- (33) Waminka-kuna-**ntin** runa-kuna-**ntin** papa q'epi-ta-**pas** lisa
 q'epi-ta-**pa** q'epi-rqa-nku
 Soldier-pl-**conj** man-pl-**conj** potato bulk-acc-**conj** smooth potato
 bulk-acc-**conj** carry-past-3pl
 'The soldiers and the civilians carried a bulk of potatoes as well as a bulk of smooth potatoes.'

This sentence has several interpretations, however, it crucially cannot mean that the soldiers carried the potatoes and the civilians the smooth potatoes, since the subject must be collective.

If the subject is collective and the object distributive, once again, it should not be possible to interpret the sentence as meaning that one of the conjoined subjects carried one of the objects, and the other subject carried the other object, but rather, that each objects were carried in turn by collective subject:

- (34) Waminka-kuna-**ntin** runa-kuna-**ntin** papa q'epi-ta-**wan** lisa
 q'epi-ta-**wan** q'epi-rqa-nku
 Soldier-pl-**conj** man-pl-**conj** potato bulk-acc-**conj** smooth potato
 bulk-acc-**conj** carry-past-3p-pl
 'The soldiers and the civilians carried a bulk of potatoes and a bulk of smooth potatoes'

4. Crosslinguistic Parallelism. Spanish

The existence of an aspectually restricted conjunction in Spanish (**entre...y**) has been observed by Rigau (1989a, b). Notice that the subject object asymmetry also holds for this conjunction:

Subject:

- (35) **Entre** los hombres **y** las mujeres levantaron la caja
 Between the men and the women lifted the box
 'The men and the women lifted the box collectively.'

Object:

- (36) *El soplete fundió **entre** la viga **y** la columna
 The weld fused between the beam and the column
 'The weld fused the beam and the column together.'

Spanish also seems to have the equivalent of the eventive conjunction:

- (37) **Tanto** los hombres **como** las mujeres vinieron. Los hombres a las seis y las mujeres a las cinco.
 As much the men as the women came. The men at six and the women at five.
 'The men as well as the women came. The men came at six and the women at five o'clock'

What Spanish seems to lack is the distributive conjunction.

5. Conclusion

This paper has presented evidence from Quechua for three different types of conjunction which have different semantic interpretations that correlate with syntactic properties. In particular, we have argued that some conjunctions (-nti) are interpreted collectively because they must be generated in the projection where aspectual properties are checked, namely, the outer layer of VP. Since subjects are generated in this position, it will not be able to have objects coordinated by this conjunction. The other two conjunctions, on the other hand, must be interpreted in two specific functional projections: DistP for -wan and TP for -pas.

Additionally, we have argued that this syntactically complex distribution of conjunctions is not random, as shown by a very similar one from conjunctions in Spanish.

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