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The semantics of discontinuous noun phrases in Quechua[†]

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In Cuzco Quechua there is a construction in which elements that typically appear noun phrase-internally may appear outside the noun phrase while receiving the same Case-marking as the noun. In this paper I look at the semantics and syntax of this discontinuous noun phrase construction. I argue that when an adjective or a quantifier appears outside the noun phrase it is also interpreted externally and not in a possible base position within the noun phrase itself. I adopt this analysis to explain data in which the discontinuous noun phrase is interpreted as necessarily indefinite. I also examine the behavior of an apparently exceptional universal quantifier *sapa* ‘each’ which cannot participate in the discontinuous construction. I explain this distribution of *sapa*, which differs from that of other universal quantifiers, by proposing that the basic use of *sapa* is as a quantifier over adverbial phrases.

1 Introduction

Quechua noun phrases, like English noun phrases, typically occur as single constituents with a fairly fixed internal word order. Quechua has overt Case markers which appear at the end of the string of noun phrase-internal elements. An example from Cuzco Quechua is shown in (1).¹

- (1) [*Hatun wasi*]-*ta* *riku-rqa-ni*.
big house-ACC see-PAST-1sg
‘I saw a/the big house.’

[†]Many thanks to my Cuzco consultants, especially to Inés Callalli Villafuerte and Edith Zevallos Apaza without whose careful judgments and insights I could not have conducted this research. Thanks also to Chris Collins, Molly Diesing and Sally McConnell-Ginet for discussing relevant issues, and to audiences at Cornell and SULA 2 for helpful commentary. All errors are my own.

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¹The following abbreviations are used in glosses in this paper: ABL=ablative case, ACC=accusative case, BI.ADV=bipersonal adverbializer, CIS=cislocative, DAT=dative case, DELIM=delimitive, DIMIN=diminutive, EUPH=euphonic, EVID=evidential marker, FOC=focus marker, GEN=genitive case, INCH=inchoative, NM=nominalizer, PL=plural, Q=interrogative particle, TOP=topic marker, UNI.ADV=unipersonal adverbializer.

In (1), the noun phrase ‘big house’ is expressed as the constituent *hatun wasi* which shows the standard Quechua word order (adjective + noun) and is marked with the accusative Case marker *-ta*. However, unlike English, Quechua also allows discontinuous noun phrases, in which different parts of an apparent single noun phrase each receive their own Case marker. These parts may be separated by the verb (or some other clausal constituent) as in (2) and (4) or adjacent to one another as in (3). I will describe all these cases as involving discontinuous noun phrases.

- (2) *Wasi-ta riku-rqa-ni hatun-ta.*
 house-ACC see-PAST-1sg big-ACC
 ‘I saw a big house.’
- (3) *Pisi-ta mikhuna-ta mikhu-rqa-ni.*
 a.little-ACC food-ACC eat-PAST-1sg
 ‘I ate a little food.’
- (4) *Qulqi-y-ta tari-rqa-ni llipi-n-ta*
 money-1sg-ACC find-PAST-1sg all-3sg-ACC
 ‘I found all my money.’ (Muysken 1989 15a)

This phenomenon is described as “floating” of the modifier by Lefebvre and Muysken [1988], who further note that the directionality of the float is not fixed [p.163]. This variability of word order can also be observed in (2) to (4). In addition to examples like those above, which involve quantifiers and adjectives, there are discontinuous noun phrases in Quechua in which possessors or *wh*-words appear separated from the noun. Here I will limit my discussion to quantifier and adjective discontinuities.

In this paper I look at the semantics and syntax of the discontinuous noun phrase construction in Cuzco Quechua. I consider the question of whether a continuous DP is constructed (or perhaps re-constructed) as a single unit at the level of interpretation (LF). I also ask more generally what semantic relationship is established or indicated via the “co-Case marking” of the different parts of the noun phrase. In addressing these questions I look at some semantic differences between the continuous and discontinuous versions of noun phrases and point to implications for the LF structure of discontinuous NPs. In particular, I argue that the indefiniteness of certain discontinuous noun phrase constructions points to an interpretive configuration in which the modifying element appears outside of the definiteness head of the DP which contains the noun itself.

The data in this paper come from my own fieldwork, from past syntactic studies (as noted), and also from an autobiographical narrative by Gregorio Condori Mamani [Valderama & Escalante 1977] (GCM), who was a porter (*cargador*) in Cuzco. The organization of the paper is as follows. In the next section I provide more discontinuous noun phrase data and background on Quechua quantifiers. In Section 3 I discuss previous syntactic analyses of discontinuous noun phrases in Quechua and present data illustrating semantic effects of the discontinuity. In Section 4 I propose an analysis which essentially states that co-Case marking of a modifier indicates scope outside the DP. In Section 5 I discuss an apparently misbehaved strong quantifier, *sapa* ‘each’. Section 6 is the conclusion.

2 More data

2.1 Co-Case marking

I begin with further examples of the phenomenon of “co-Case marking” (to borrow a term used in [Lefebvre & Muysken 1988]). In (5) to (7) I show further examples involving the three categories of discontinuous noun phrases which I address in this paper: weak quantifier, adjective and strong quantifier discontinuities. In (8) and (9) I show examples of possessor and wh-word discontinuities, although I will not discuss them individually.

(5) **Weak quantifier:**

...*mikhuna-ta-qa ashka-ta-n qu-wa-q-ku.*
 food-ACC-TOP a.lot-ACC-evid give-1sg-PAST(habitual)-3pl
 ‘...they gave me a lot of food.’ (GCM p.25)

(6) **Adjective:**

Runa-ta riqsi-ni kallpa-yuq-ta
 man-ACC know-1sg strength-WITH-ACC
 ‘I know a man with strength.’ [‘I know a strong man.’] (Lefebvre & Muysken 1988 p.142)

(7) **Strong quantifier:**

...*llipin-ta manka-kuna-ta chhalara-pu-ni.*
 all-ACC pot-PL-ACC change-1sg
 ‘I changed all the pots.’ (GCM p.27)

(8) **Possessor:**

Nuqa Gabriela-q-ta ashka aqha-n-ta ukya-ra-ni.
 I Gabriela-GEN-ACC a.lot cornbeer-3sg-ACC drink-PAST-1sg
 ‘I drank a lot of Gabriela’s cornbeer.’

(9) **Wh-word:**

Hayk’a-ta riku-rqa-nki Maria-q hatun wasi-n-kuna-ta?
 How.many-ACC see-PAST-2sg Maria-GEN big house-3sg-PL-ACC
 ‘How many of Maria’s big houses did you see?’

The phenomenon I am considering here is largely limited to the direct object position. Certainly it is most common and productive when involving the *-ta* marker. The basic incompatibility of co-Case marking with subjects is shown in (10) and with locatives is shown in (11).²

²As pointed out in [Muysken 1989 p.636], the incompatibility of quantifier discontinuities with subjects is not entirely clear. The example in (i) is cited. My consultants are similarly uncertain regarding these constructions.

(i) *?[e_i runa-kuna] hamu-n llipi-n_i
 man-PL come-3 all-3

‘The men all come.’ (Muysken 1989 (22))

- (10) *?Ashka hamu-ra-nku runa.
 many come-PAST-3pl person
 ‘Many people came.’
- (11) *Hatun-pi tiya-ni wasi-pi.
 big-LOC live-1sg house-LOC
 ‘I live in a big house.’

Besides the cases of quantification and (restrictive) modification considered here, there are other situations in which the same Case marker may be used twice in Quechua. These include ambiguous Case markers, conjunctions, appositives, and secondary predicates. These constructions are outside of the scope of this paper. However, the last of these may closely resemble the constructions studied here and an example is given below in footnote 4.

2.2 Quantifiers

In this section I give further background on the Quechua quantifiers in question. I claim that the basic use of the quantifiers is as D-quantifiers, or “determiner-like” quantifiers (in the vocabulary of [Bach et al. 1995]). An example is shown in (12).

- (12) *wakin* ‘some (of)’
ayni-ta-qa ru-ra-yku [waki-lla-n paisano]...
 work.exchange-ACC-TOP do-PAST-1pl(excl.) some-DELIM-3 peasant
 ‘...only some peasants did the work exchange.’ (GCM p.36)

Other quantifiers that appear DP-internal in constructions such as these are *pisi* ‘a few/a little’, *ashka* ‘a lot/many’, *tukuy* ‘all/every’, *llipin* ‘all/every’, *sapa* ‘each’, and numbers like *huk* ‘one’. All these quantifiers behave like classic D-quantifiers in a variety of ways. For example, within the noun phrase they must appear pre-nominally, as illustrated in (13). Furthermore, they can be scrambled along with the DP as in (14). Finally, these modifiers do not have their own Case markers in these common usages, and are not ambiguous with respect to their associates.

- (13) *[Aqha pisi]-ta ukya-rqa-ni.
 cornbeer a.little-ACC drink-PAST-1sg
- (14) Ukya-rqa-ni [pisi aqha]-ta.
 drink-PAST-1sg a.little cornbeer-ACC
 ‘I drank a little cornbeer.’

Although the most common use of these quantifiers is as D-quantifiers, in DP-internal position, one issue which complicates this picture is that they sometimes also have adverbial (A-quantificational) uses. These uses have been noted by Cusihuamán [1976] among others. A clear adverbial use of the weak quantifier *pisi* ‘a little’ is given in (15). Note that here there is no direct object (implicit or explicit) which could be construed as co-Case-marked with the adverb *pisi-ta*.

- (15) *Pisi-ta llank'a-rqa-ni.*
 a.little-*ta* work-PAST-1sg
 'I worked a little.'

Non-quantificational adjectives can also participate in this adverbial construction. An example is illustrated in (16). Here, however, there is an ambiguity present. The ambiguity is between a verb-modifier use of *sumaq-ta* ('well') and a noun-modifier use of *sumaq-ta* ('good'). Because of the coindexation between *wasi* 'house' and *sumaq* 'good' in the latter case, and the adjectival interpretation of 'good', this reading falls into my category of discontinuous noun phrase.

- (16) *Nuqa wasi-ta sumaq-ta qhawa-sha-ni.*
 I house-ACC good-*ta* watch-PROG-1sg
 'I am watching over the house well.'
 ? 'I am watching over a nice house.'

In (16), consultants vary on whether one or both readings are salient. However, the consultant who suggested the above example with the first reading also proposed the following two examples in which *sumaq* 'good' is construed as adjectival (modifying a noun) and felt that (17(a)) and (17(b)) have the same meaning.

- (17) *Machu Picchu-pi sumaq mikhuna-ta mikhu-ra-yku.*
 Machu Picchu-LOC good food-ACC eat-PAST-2pl(excl.)
 'At Machu Picchu, we ate good food.'
- (18) *Machu Picchu-pi sumaq-ta mikhuna-ta mikhu-ra-yku.*
 Machu Picchu-LOC good-ACC food-ACC eat-PAST-2pl(excl.)
 'At Machu Picchu, we ate good food.'

One hypothesis which we might entertain at this point is that the adjective or quantifier is some sort of unselective binder. That is, that this element may be associated to any element within the VP. This would be a way to view both meanings of *sumaq-ta* 'good-*ta*' in (16) as essentially adverbial, with the difference correlating with the identity of the bindee. That this is not the case is illustrated in examples in which an oblique appears within the VP but cannot be associated with the *-ta*-marked modifier in the same way as the discontinuous noun phrase reading of examples like (16) associates the adjective *sumaq* 'good' with the noun *wasi* 'house'. This is illustrated in (19) and (20), where the *-ta*-marked modifier fails to generate a reading in which it is understood as modifying a locatively-marked oblique (*wasi-pi*, 'in a house').

- (19) **Hatun-ta tiya-ni wasi-pi.*
 big-ACC live-1sg house-LOC
 (intended: 'I live in a big house.')
- (20) ?*Pisi-ta tiya-rqa-ni wasi-kuna-pi*
 a.little-ACC live-PAST-1sg house-PL-LOC
 *'I lived in a few houses.'
 (One consultant did suggest the adverbial reading of *pisi-ta*: 'I lived in the houses a little (for a short time).')

Recall further that we saw in (11) that an adjective such as that in (19) also cannot be locatively co-Case-marked with *wasi-pi* ('house-LOC'). Thus I conclude that the *-ta* marker on the adjective or quantifier is not marking an unselective binder/adverbial but rather is indeed co-Case-marked with the direct object.

3 Interpretation and structure

3.1 Previous work

A small body of previous work has considered the syntax of discontinuous noun phrases in Quechua. In this section I discuss a range of these past approaches.

The approach to what I have been calling discontinuous noun phrases adopted by many Quechua grammarians is that these are examples of the adverbial construction mentioned in the previous section. Antonio Cusihuamán provides the following examples in the course of illustrating adverbials.

- (21) *Hatun-ta-n chakra-ta-qa muna-yku.*
 big-ta-FOC field-ACC-TOP want-2pl(excl.)
 'We want bigger plots.' (Cusihuamán 1976 p.128)

Another similar reading salient to my consultant: 'We want a big field.'

- (22) *Sumaq-ta-n papa-qa wiña-mu-sha-n.*
 good-ta-FOC potato-TOP grow-CIS-PROG-3sg
 'The potato is growing well.' (Cusihuamán 1976 p.128)

Here, (21) contains what I consider to be a discontinuous noun phrase since the adjective 'big' modifies the noun 'field', whereas (22) I consider to be a true adverbial construction.

Other approaches to this construction are found in [Lefebvre & Muysken 1988], [Muysken 1989] and [Sánchez 1996]. Since each of these works presents a different analysis of discontinuous noun phrases I will briefly discuss each of these in turn. Each will be shown to answer the question "Is the discontinuous structure achieved through syntactic extraction?" in a different way.

Lefebvre and Muysken [1988] look at a wide range of phenomena involving co-Case marking. They posit that instances of discontinuous quantifiers and adjectives are a result of extraction of these modifying elements from the noun phrase. A sample analysis for an instance of "adjective float" is given in (23). According to this theory there is a Case position in the periphery of the noun phrase which functions as an escape hatch from the NP, and the floated element picks up its Case marker in that position.

- (23) [_{*i*} Runa]-**ta** riqsi-ni hatun_{*i*}-**ta**
 [_{*i*} man]-ACC know-1sg tall_{*i*}-ACC
 'I know a tall man.' (from Lefebvre & Muysken (6) p.143)

In [Sánchez 1996], an extraction analysis of a different sort is posited (in particular for the case of disjoint adjectives and nouns). Here, the idea is that the modifier is left behind and the noun phrase raises. Sánchez adopts the idea of Lefebvre and Muysken that the Spec of the noun phrase is a Case position, where the extracted element picks up its Case marking.

- (24) [_{F_{oc}P} Runa_i-**ta** [_{F_{oc}} riqsi-ni [_{AgrP} [_{DP} [t'_i hatun_j-**ta**] [_{D'} [_{PredP} [t_i t_j]]]]]]]]]
 [_{F_{oc}P} Man_i-ACC [_{F_{oc}} know-1sg [_{AgrP} [_{DP} [t'_i tall_j-ACC] [_{D'} [_{PredP} [t_i t_j]]]]]]]]]
 'I know a tall man.' (from Sánchez 1996 pp128-131)

(In the above example note that the adjective ultimately moves to the Spec,DP position also. However, unlike the noun it never actually leaves DP.)

Thirdly, the analysis in [Muysken 1989] suggests that in a variety of constructions³ involving a double *-ta* Case-marker there is no literal extraction of one element out of another, but rather there is a co-indexation between the NP and another phrase ("XP", which could represent a variety of categories) and that this co-indexation is what establishes the semantic relationship between the two constituents. In certain cases, including that of "quantifier float", Muysken (p.634) proposes that an empty operator moves from the base position of a quantifier in the NP to the Comp position. This operator is coindexed with the (external) quantifier itself, which allows for the quantifier to be interpreted at LF as the element filling the gap in the NP resulting from the operator movement. This analysis is presented as part of a theory of "predication chains", in which co-Case marking is one method of establishing a predication relationship between the NP and the XP (rather than, say, a purely structural relationship like C-command). An illustration of this analysis is shown in (25).

- (25) [_{VP} ...XP_i ...NP_i...]
 [_{VP} [e_i qulqi-y]-**ta** tari-rqa-ni *llipin-ta*_i]
 [_{VP} [e_i money-1sg]-ACC find-PAST-1sg all-ACC_i]
 'I found all my money.' (Muysken 1989 (15a))

To summarize, all three basic syntactic options are represented in the literature: discontinuous noun phrases have been claimed to be the result of modifier extraction, noun extraction, and no extraction at all. Before returning to a comparison of these approaches, I will look more closely at the meaning of discontinuous versus continuous noun phrases. I will then consider the implications of the semantics for the three types of analysis presented here. My eventual proposal will be that even if the modifier does originate within the noun phrase, it is nonetheless interpreted externally, and not in its base position.

3.2 *Semantic effects of co-Case marking*

In this section I will provide data showing that continuous and discontinuous noun phrases are not identical in meaning. In particular, weak quantifiers and adjectives in discontinuous constructions yield indefinite meanings of the "complete" noun phrase. I consider each of the three cases of adjectives, weak quantifiers and strong quantifiers in turn.

³This study involves a rather different range of constructions from the ones I am considering here, including for example apparent small clauses and apparent extracted subjects from subordinate clauses. However, it does encompass co-Case-marked quantifiers, like the ones I discuss in this paper.

3.2.1 *Adjectives*

When an adjective and a noun appear independently Case-marked, this discontinuous noun phrase receives an indefinite interpretation. By contrast the continuous expression can be either indefinite or definite. One context in which this contrast becomes evident is illustrated in the examples in (26). Here, the speaker and I (the addressee) have previously discussed a particular big house in the speaker's village. I subsequently visit her village, and when I return the speaker questions me about my visit. Under these circumstances my consultants find only (26a) to be appropriate ('Did you see the big house?'), not (26b) ('Did you see a big house?').

- (26) (a) [*Hatun wasi*]-**ta** *riku-rqa-nki-chu*?
 big house-ACC see-PAST-2sg-Q
 'Did you see a/the big house?'
 (b) #*Hatun-ta wasi-ta* *riku-rqa-nki-chu*?
 big-ACC house-ACC see-PAST-2sg-Q
 'Did you see a big house?'

It is interesting to note that this same paradigm is reflected also in the glosses of examples such as (27) from [Sánchez 1996].

- (27) (a) [*Hatun runa*]-**ta**...
 big man-ACC
 'A/the big man' (Sánchez 1996 (263) p.129)
 (b) *Runa-ta riqsi-ni hatun-ta*
 man-ACC know-1sg big-ACC
 'I know a big man.' (Sánchez 1996 (257) p.126)

In (27) we again see that the discontinuous noun phrase is interpreted as if it were a continuous but indefinite noun phrase.⁴

⁴I should note that some consultants do accept certain examples consisting of a definite noun phrase and an adjective, each with their own Case marker. However, in such cases the adjective seems to be interpreted as a depictive secondary predicate, which I take to be a construction distinct from the cases of restrictive modification found in my examples of discontinuous noun phrases. Consider (i), which is similar to (27(b)) except a demonstrative is associated with the noun. Also, the verb is in the past tense, which one consultant proposed to make the only possible reading more plausible. Note that the adjective is now interpreted as a depictive secondary predicate.

(i) ?[*Chay runa*]-**ta hatun-ta riqsi-ra-ni.
 that man-ACC big-ACC know-PAST-1sg
 'I knew that man as a big person.'**

Consultant's comment: Perhaps he is sick now, and no longer big?

We now see that since a secondary predicate reading of 'big' is not salient in the context given above for (27(b)), that example is not saved by this alternative structure. For examples and discussion of ambiguity between discontinuous noun phrases and depictive secondary predicates in Australian languages see [Schultze-Berndt & Himmelman p.36].

3.2.2 *Weak quantifiers*

A co-Case-marked weak quantifier also can provide a strategy for forcing an indefinite interpretation. Examples comparing a continuous noun phrase with a discontinuous noun phrase are shown in (28(a)) and (28(b)). Note that the best English translation of the discontinuous noun phrase in (28(b)) involves the partitive expression ‘a few of Ana’s llamas’. Again the discontinuous version is necessarily indefinite. In this example the indefinite reading is not available for the continuous version (28(a)), and so the discontinuity is forced if in fact Ana has llamas that I didn’t see.

- (28) (a) [*Ana-q pisi llama-n*]-**ta** *riku-rqa-ni*
 Ana-GEN a.few llama-3sg-ACC see-PAST-1sg
 ‘I saw Ana’s few llamas.’
 *‘I saw a few of Ana’s llamas.’

- (b) [*Ana-q llama-n*]-**ta** *pisi-ta* *riku-rqa-ni*.
 Ana-GEN llama-3sg-ACC a.few-ACC see-PAST-1sg
 ‘I saw a few of Ana’s llamas.’

It is interesting to compare (28(b)) with the paraphrase in (29). Consultants feel that these two examples have the same meaning, each indicating that I saw a small number of llamas among the total (larger) number of llamas owned by Ana. However, the expression in (29) contains an ablative noun phrase as an adjunct and I assume a null noun (*llama*) in the object position noun phrase containing *pisi* ‘a little’.

- (29) [*Ana-q llama-n*]-*manta* *pisi-ta* *riku-rqa-ni*.
 Ana-GEN llama-3sg-ABL a.few-ACC see-PAST-1sg
 ‘Of Ana’s llamas, I saw a few.’

Another example of a discontinuous noun phrase with a weak quantifier and an overt demonstrative is shown in (30).⁵ Note that the interpretation is again indefinite.

- (30) *Kinsa-ta* [*chay manka-kuna*]-**ta** *ranti-rqa-ni*.
 three-ACC that pot-PL-ACC buy-PAST-1sg
 ‘I bought three of those pots.’
 *‘I bought those three pots.’

⁵In some cases of co-Case marking between a weak quantifier and a noun phrase consisting of demonstrative+noun as in (30), some consultants have a strong preference for an ablative marker on the noun phrase instead of *-ta*. I do not at this point know what circumstances lead to such a preference in some examples but not others.

3.2.3 Strong quantifiers

In the previous two sections we have seen that in the cases of weak quantifiers and adjectives, discontinuous noun phrases force indefinite readings. However, it is not simply always the case that co-Case marking can be associated with the indefiniteness of the (complete) DP in question. Consider the following examples in which a strong quantifier *tukuy* ‘all’ appears in noun phrase-internal position (in (31(a))) and then in a disjoint position (in (31(b))). I am not aware of any semantic differences between these two sentences.

- (31) (a) *Nuqa [Gabriela-q tukuy aqha-n]-ta ukya-ra-ni.*
 I Gabriela-GEN all cornbeer-3sg-ACC drink-PAST-1sg
 ‘I drank all of Gabriela’s cornbeer.’
- (b) *Nuqa [Gabriela-q aqha-n]-ta tukuy-ta ukya-ra-ni.*
 I Gabriela-GEN cornbeer-3sg-ACC all-ACC drink-PAST-1sg
 ‘I drink all of Gabriela’s cornbeer.’

3.3 Approaches to the indefiniteness of discontinuous noun phrases

Before giving a meaning-oriented analysis of the LF structure of discontinuous noun phrases, in this section I present briefly and reject two candidate explanations for the semantic effects just discussed.

Sánchez [1996] suggests that when adjectives are “stranded” the noun phrase moves out of the DP to a focus position above TP. Hence she suggests that in sentence (32), there is focus on *runa* ‘man’.

- (32) *Runa-ta riqsi-ni hatun-ta*
 man-ACC know-1sg big-ACC
 ‘I know a big MAN.’ (Sánchez 1996 p.129 (265))

However, in general I am unable to find evidence that the noun is necessarily focused, and indeed a different element in the sentence may just as easily appear with a focus marker, as seen in (33).

- (33) *Nuqa-n pisi-lla-ta llama-ta muna-ni michi-mu-na-y-paq*
 I-FOC/EVID a.few-DELIM-ACC llama-ACC want-1sg herd-NM-1sg-purpose
 ‘I want a few llamas so I can herd them.’

I conclude that while discontinuity may facilitate focus, since it permits what are normally subconstituents of the DP to be independently focus marked within the sentence, there is no direct dependence between focus and discontinuous noun phrases.

Another possibility which is suggested by the kind of data seen in 3.2.1 and 3.2.2 when viewed as a restriction on extraction is that what we have here is an instance of the cross-linguistic Specificity Effect. This phenomenon has been studied in a variety of languages, for instance in Germanic (e.g. [Diesing 1992]) and Turkish (e.g. [Kornfilt 2002]) and others. The basic generalization is that no extraction is allowed from specific DPs.

Of course, we must have some way to recognize specific DPs in order to see if this is the relevant constraint in Quechua. In [Enç 1990] it is proposed that specificity should be understood in terms of membership in a contextually prominent group (as opposed to definiteness, which requires that the particular referent of a definite noun phrase be contextually prominent). In [Diesing 1992] this specificity criterion is analyzed in terms of presuppositionality. An example provided by Enç of a specific noun phrase in Turkish is ‘two girls’ in (34).

- (34) *Odam-a birkaç çocuk girdi. İki kız-i taniyordum.*
 my-room-DAT several child entered two girl-ACC I-knew
 ‘Several children entered my room. I knew two girls.’ (Enç 1990 (16,17))

In (34), the presence of the accusative marker makes ‘two girls’ unambiguously specific, and hence the two girls are included in the contextually prominent set of children who entered the room. Without the accusative marker this noun phrase is non-specific and hence the two girls may not be members of the original set.

If we look at a similar example in Quechua we find that at least under this definition of specificity a discontinuous noun phrase may be specific, as illustrated in (35). Here consultants report that the discontinuous ‘two girls’ may be members of the group who arrived or not.

- (35) *Ashka irqi-kuna chaya-mu-rqa-nku. Iskay-ta warmi warmacha-ta*
 A.lot child-PL arrive-CIS-PAST-3pl. two-ACC girl-ACC
riqsi-ra-ni.
 know-PAST-1sg
 ‘A lot of children arrived. I knew two girls.’

Now if the semantic differences between continuous and discontinuous noun phrases in Quechua could be explained via the Specificity Effect we would expect the two girls in (35) to be outside of the original group. Thus we cannot immediately attribute the indefiniteness of the co-Case-marked noun phrases to a restriction on extraction from specific noun phrases.

Also striking in this regard are the examples of apparent partitives as seen above in (28) and the case of the co-Case marking of strong quantifiers as in (31). These examples cannot be assimilated to the view of a Specificity Effect outlined above, since in both cases the noun phrase with the quantifier internal to it seems to be definite.

In the following section I will therefore pursue a different line of reasoning in order to explain the indefiniteness of certain discontinuous noun phrases. In contrast to an analysis in terms of the Specificity Effect, where essentially this indefiniteness is attributed to a condition on extraction, my analysis below will be that the indefiniteness arises as a result of the external interpretation of the modifier.

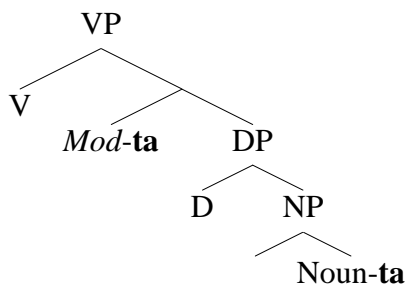
4 Co-Case marking indicates scope outside the DP

4.1 *The basic interpretive structure*

Recall that one of the basic questions surrounding the interpretation of discontinuous noun phrases was whether these noun phrases are interpreted as a single unit at LF. The

semantic differences between the discontinuous and continuous versions of the same noun phrase indicate that even if some sort of constituent reconstruction takes place, it cannot be the case that the LF structures of the two versions are identical. However, the lack of ambiguity of the association between the adjective or quantifier and the noun, and the similarity in meaning because the two surface versions of the noun phrase do suggest that the two parts are interpreted as a unit. To solve this problem I posit an interpretive structure in which the quantifier or adjective (labeled *Mod*) is located outside the scope of the definiteness head *D* of the noun phrase at LF. This solution is illustrated schematically in (36). I return below to the question of whether the Modifier is in a DP-internal position (Spec,DP) or a position immediately dominating the DP.

(36)

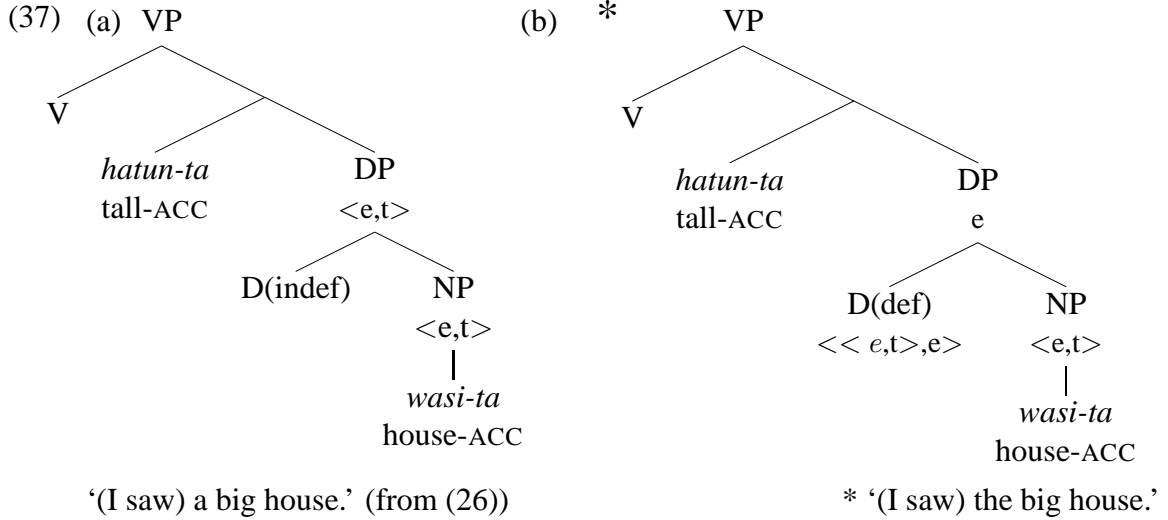


This structure is based on the notion that an external modifier is interpreted externally to the noun phrase. I claim that it captures not only the empirical fact that the modifier appears outside of the noun phrase at surface structure, but also the indefiniteness effect described in Section 3. In the next sections I show how this structure correctly predicts the interpretations noted for discontinuous noun phrases containing adjectives, weak quantifiers and strong quantifiers. I then return to some syntactic issues in this analysis.

4.2 *LF structures*

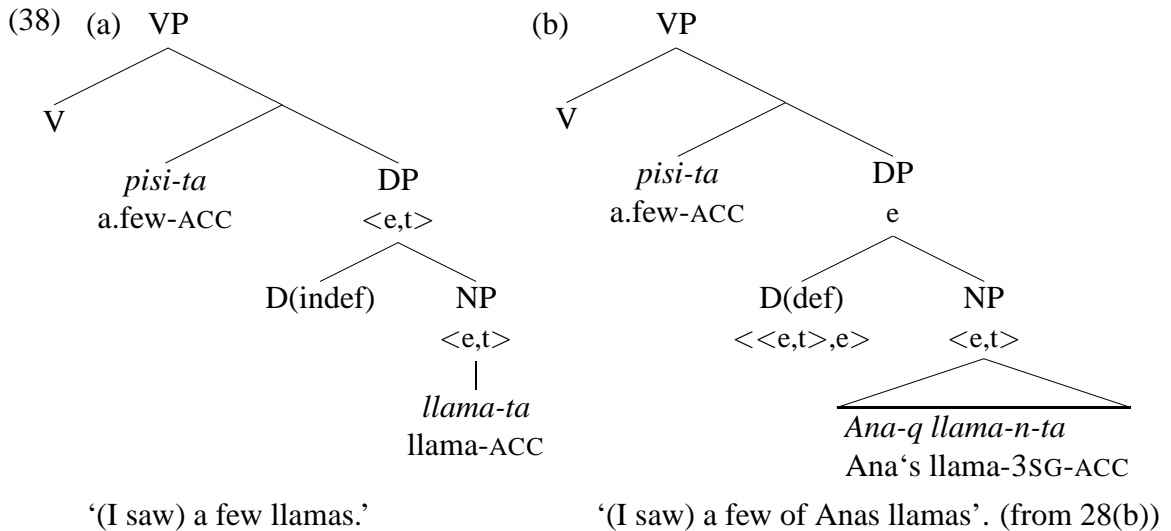
4.2.1 *Adjectives*

I assume that adjectives are modifiers of type $\langle e,t \rangle$. When an adjective appears outside of the head responsible for definiteness, the resulting interpretation of course depends on the type of the sister to the adjective. Consider first the case of an indefinite DP. I represent the indefiniteness by a [-definite] feature on the head *D* (though a reasonable alternative would be to assume that no *D* is present at all in this case, and we have simply a bare NP). I assume that an indefinite DP is also of type $\langle e,t \rangle$ (and presumably can be eventually subject to existential closure). Thus I represent the indefinite *D* head as semantically vacuous. The interpretive configuration of a discontinuous noun phrase of this sort is shown in (37(a)). In (37(b)) I show the disallowed structure in which the adjective modifies a definite DP. Intuitively, the problem here is that the adjective cannot further modify a constituent of type e . This is expressed formally by the fact that the result of such a combination could only be of type t , and hence this constituent could not function as the (nominal) direct object of the verb ('see').



4.2.2 Weak quantifiers

We now turn to the case of weak quantifiers, which behave similarly to the adjectives but in fact allow more structural options due to what I take to be their more flexible types. Again I start with the case in which the determiner is indefinite, and consider the structure in (38(a)) in which the weak quantifier is interpreted outside of the definiteness head.



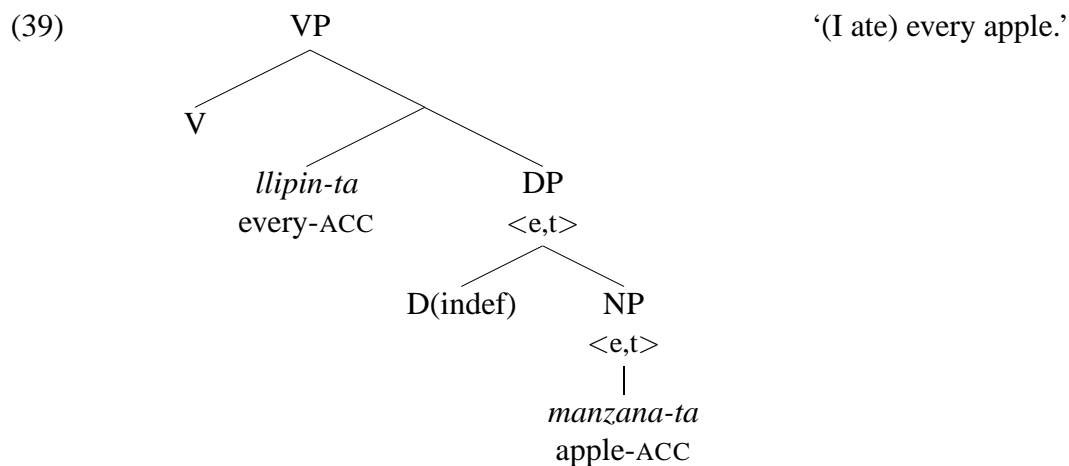
As in the case of adjectives, the interpretation here is the one expected in the case of a DP-internal weak quantifier too, again because of the semantic vacuousness of the indefinite D. However, I propose to capture the differing behavior of weak quantifiers and adjectives by assuming that the apparently partitive readings allowed in the case of weak quantifier discontinuous noun phrases are a result of the composition of the weak quantifier with the definite noun phrase as illustrated in (38(b)).⁶

⁶It is not clear that a possessor+noun combination should always be considered definite in Quechua, however. One reason for this is that such phrases can appear in existential contexts. For space reasons I am unable to discuss possessor phrases or co-Case-marked possessors further here, but leave this to future work.

Therefore I propose that a weak quantifier can combine directly with a type e DP and the result is interpreted as an indefinite, partitive expression. In fact, an analysis in which quantifiers regularly and perhaps universally take complements of type e can be found in [Matthewson 2001]. However, here I presume that this is only one option for weak quantifiers in Quechua, and still assume that quantifiers can also combine directly with a type $\langle e,t \rangle$ nominal as we saw above in (38(a)).

4.2.3 Strong quantifiers

Finally we turn to the case of strong quantifiers. Recall that strong quantifiers did not obey the generalization that seemed to prohibit discontinuous noun phrases from encoding definite DPs. In fact, strong quantifiers are perfectly able to appear separated from the noun they are associated to. To explain this fact under the current analysis, we may simply posit the configuration in (39) for the LF structure of a discontinuous noun phrase with the strong quantifier *llipin* ‘every’.



Note that in (39) I represent *llipin* ‘every’ as combining directly with an indefinite DP and the overall unit is interpreted as ‘every apple’. It is quite possible, however, that just as in the case of weak quantifiers, a strong quantifier can also take a definite DP complement. At this point I am not aware of semantic differences between these possibilities.

4.3 Revisiting the syntactic options

In the preceding section I suggested that the semantic differences between continuous and discontinuous noun phrases can be explained by positing an LF structure in which the modifier appears outside of the definiteness head of the DP. In this section I consider the syntactic issues raised by this configuration, particularly in light of the three syntactic analyses previously discussed. These three analyses are summarized again in (40).

- (40) (a) Modifier stranding [Sánchez 1996] (b) Modifier floating [Lefebvre & Muysken 1988] (c) Predication chain [Muysken 1989]
-

Among these three, my analysis is most immediately incompatible with (40(a)), modifier stranding. Omitting details, the basic idea is as shown: the NP moves out of the DP, leaving the modifier stranded. The problem for me here is that the only way for the adjective to have scope over the noun at LF, which is part of what I am arguing, is via reconstruction of ‘man_i’ to base position. This may very well be what Sánchez has in mind, but of course this solution predicts that (aside from the proposed focus effect, which I discussed in Section 3), the continuous and discontinuous noun phrases should have the same meaning. The indefiniteness restriction would not be captured.

There is another piece of evidence against (40(a)), which is that although the basic word order in a noun phrase is numeral+adjective+noun, as in (41) it is not possible for the numeral+adjective combination to appear alone in the discontinuous version proposed in (42). This seems surprising if the noun phrase containing just *wasi* ‘house’ can be extracted. On the other hand, the combination adjective+noun *can* appear alone as in (43), with the expected indefinite meaning.

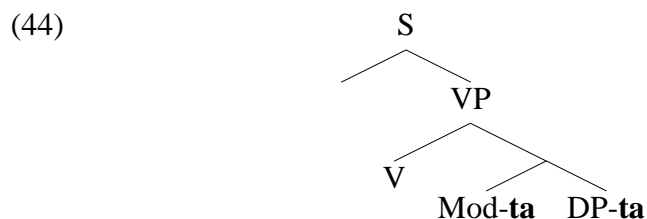
- (41) [*Kinsa hatun wasi*]-*ta* *riku-rqa-ni*.
 three big house-ACC see-PAST-1sg
 ‘I saw three big houses.’
- (42) **Wasi-ta* [*kinsa hatun*]-*ta* *riku-rqa-ni*.
 house-ACC three big-ACC see-PAST-1sg
 Intended meaning: ‘I saw three big houses.’
- (43) *Kinsa-ta* *riku-rqa-ni* [*hatun wasi*]-*ta*.
 three-ACC see-PAST-1sg big house-ACC
 ‘I saw three big houses.’

Turning now to the structures sketched in (40(b)) and (40(c)), I believe that my analysis is potentially compatible with either of these syntactic options. I do not attempt to choose between them, but comment briefly on each.

The option in (40(b)), in which the modifier leaves the noun phrase (possibly picking up Case marking in Spec,DP as proposed in [Lefebvre & Muysken 1988] and supported by [Sánchez 1996]), could be adopted in conjunction with the analysis I have outlined here. However, the modifier could not be construed as reconstructing to its base position. Clearly, if the role of the base position of the modifier is to provide the position at which the moved

element is to be interpreted then there is no expected interpretation difference between the continuous and discontinuous versions of the noun phrase. (The possibility that there is an island effect associated with specific noun phrases here has already been discussed and rejected.) However, it could be that reconstruction takes place to the Spec,DP escape hatch, which would give us the exact LF configuration I have posited. The question remains open, however, of why reconstruction would only be to this intermediary position.

The LF structure I have proposed is also compatible with a structure in which the modifier and noun are generated as independent constituents and become associated through some sort of coindexation as in (40(c)). This analysis also raises a number of theoretical questions, however. Assuming that accusative Case marking is associated with a particular structural configuration in association with a Case assigner, it seems that the two *-ta*-marked elements would still have to be in a local configuration at some earlier syntactic level, as in (44). Thus the LF configuration would be presumably a post-scrambling reconstruction to this basic configuration. Again the question of how the independent generation of a modifier phrase and a noun phrase in the scope of the Case assigner comes about remains open.



To summarize, the question of whether movement has occurred—that is, whether there is a trace within the DP—is addressed in my analysis with the idea that there is no semantic gap within the DP (no position to which reconstruction takes place), but there still may be a syntactic gap.

5 Why *sapa* ‘each’ won’t behave

In this section I discuss a strong quantifier which does not seem to fit into the pattern established in the previous sections, and offer an explanation.

5.1 The problem with *sapa* ‘each’

The basic problem is that *sapa* ‘each’ cannot be co-Case-marked like other universal quantifiers. This is illustrated in the contrast between (45(a)) in which *sapa* appears in a continuous noun phrase and (45(b)) in which it is disallowed as part of a discontinuous noun phrase.

- (45) (a) [*Sapa/llapan* [*Inka-kuna-manta rima-q libru*]]-**ta** *qu-wa-ra-nku*.
 each/every Inka-PL-ABL talk-NM book-ACC give-1sg-PAST-3pl
 ‘They gave me each/every book (that talked) about the Inkas.’

- (b) [*Inka-kuna-manta rima-q libru*]-**ta** **sapa-ta/llapan-ta*
 Inka-PL-ABL talk-NM book-ACC each-ACC/every-ACC
qu-wa-ra-nku.
 give-1sg-PAST-3pl
 ‘They gave me *each/every book (that talked) about the Inkas.’

5.2 Two different lexical items?

To address the basic fact that *sapa* cannot appear in a discontinuous configuration, we need to look more closely into the meaning of *sapa*. It appears in fact that there are at least two uses of *sapa* relevant to the current discussion.⁷ The first use (*sapa*₁) is as a D-quantifier meaning ‘each’, as shown in (45) above and also in (46) and (47).

- (46) *Navidad-pi [sapa₁ irqi]-man t’anta qu-y-qa, nuqa-q*
 Christmas-LOC each child-DAT bread give-INF-TOP I-GEN
costumbre-y-mi
 custom-1sg-EVID
 ‘To give bread to each child at Christmas is my custom.’

- (47) [*Sapa₁ irqi*] *urqu-man wicha-nqa*.
 each child mountain-DAT climb-3sg/FUT
 ‘Each child will climb the mountain.’

The second use, *sapa*₂ is as a quantifier over adverbial clauses. This version of *sapa* can appear immediately before a clause whose verb is marked with one of the adverbializing suffixes *-spa* (main and subordinate clause subjects are the same) or *-qti* (main and subordinate clause subjects are different). Examples are shown in (48), (49) and (50). Note that other universal quantifiers are not acceptable in this pre-adverbial position, as shown in (48).

- (48) *Sapa₂/*llapan/*tukuy [pro rima-ri-qti-y], loro-pas rima-n.*
 each/every/all speak-INCH-BI.ADV-1sg parrot-ALSO speak-3sg
 ‘Each time I talk, the parrot talks too.’

- (49) ...*chay lambe mayordomokunawan maqanakunay kaq*
 I had to fight with those wardens

sapa₂ [pro llant’a-ta otaq q’ara-ta qechu-y-ta
 each firewood-ACC or cowdung-ACC take-INF-ACC
muna-wa-qti-nku].
 want-1sg-BI.ADV-3pl
 (each time) when they wanted to take my firewood or cowdung.’ (GCM p.27)

⁷In fact there are also a variety of fascinating adverbial uses of *sapa* involving agreement morphology and discussed in [Muysken 1994] and [Sánchez 1996] which I leave aside here.

- (50) *Sapa*₂ [*pro galeta-ta mikhu-qti-y*], *loro phawa-mu-n*.
 each cracker-ACC eat-BI.ADV-1sg parrot run-CIS-3sg
 ‘Each time that I eat a cracker, the parrot comes running.’

5.3 Role of the suffix *-nka*

It is important to note at this point that the two versions of *sapa* do not have the same status with all consultants. While *sapa*₂ is acceptable to all my consultants and can be found fairly frequently in the narrative of Gregorio Condori Mamani, *sapa*₁ is unacceptable or marginal to some consultants and I have not found examples of it in the narrative. However, *sapa*₁ can be “saved” by adding the suffix *-nka*,⁸ as illustrated in (51). No *-nka* is allowed on instances of *sapa*₂, however, as illustrated in (52).

- (51) *sapa*₁-?(*nka*)/*llapa*-(**nka*)/*tukuy*-(**ni-nka*) *llama*
 each-NKA/every-NKA/all-EUPH-NKA llama
 ‘Each/every/all llama(s)’
- (52) *Sapa*₂-(**nka*) *rimari-qti-y*, *loro-pas rima-n*.
 each-NKA talk-VI.ADV-1sg parrot-ALSO talk-3sg
 ‘Each time I talk, the parrot talks too.’

Furthermore, a very common (and generally accepted) use of *sapa* is as a quantifier over time and (rarely) space adverbials. In these cases, too, *sapa-nka* is disallowed, and in this sense these uses can be assimilated with *sapa*₂. Examples are shown in (53), (54) and (55).

- (53) [*sapa*-(**nka*) *p’unchay*]
 each-*nka* day
 ‘every day’
- (54) [*sapa tuta*] *huñuna-ku-q ka-yku*
 each night gather-REFL-PAST(habitual) be-2pl(excl.)
 ‘Each night we would gather together...’ (GCM p.53)
- (55) *Kay mulaypa sutinmi Renunciable karan, payllawanmi maytapas purinay kaq...*
 ‘That mule of mine’s name was Renounceable, and with her I walked everywhere...’
- [sapa legua]-pi sama-spa,....*
 each league-LOC rest-UNI.ADV
 resting every league...’ (GCM p.41)

⁸This suffix is referred to as ‘distributive’ in [Cusihamán 1976] and its use as a distributing or group-forming morpheme associated with weak quantifiers was studied in [Faller 2001]. These uses seem to be distinct from the examples studied here of *-nka* on *sapa*. As far as I know *sapa* is the only strong quantifier which supports *-nka*.

5.4 *Proposal for sapa*

The collection of facts outlined thus far suggests that the basic use of *sapa* is as a quantifier over adverbials. Not only is this a form that is acceptable to all consultants, but the intervening suffix *-nka* is prohibited in this construction. Thus the denotation of *sapa* would be as in (56).

$$(56) \llbracket sapa \rrbracket = [\lambda P. [\lambda Q. \forall e P(e) \rightarrow Q(e)]]$$

Here $P(e)$ means that the proposition P is true of event e . Notice that only one event is named in this denotation. Leaving aside details, I am adopting here what is essentially Rothstein's [1995] analysis of 'every', as in: 'Every time I eat a cracker, the parrot comes running'. Briefly, under this analysis Q in this example would represent not the proposition that the parrot came running but the proposition that there is an event e' which is related to e by a certain matching function (M) and e' is an event of the parrot running. For details the reader is referred to Rothstein's original exposition. Under this analysis, the denotation in (56) would yield the following interpretation for sentence (50).

$$(57) [\lambda P. [\lambda Q. \forall e P(e) \rightarrow Q(e)]](\llbracket I \text{ eat a cracker} \rrbracket)(\llbracket \text{The parrot comes running} \rrbracket) = \text{true iff } \forall e, [I\text{-eat-cracker}(e) \rightarrow \exists e', [\text{Parrot-running}(e')] \text{ and } M(e')=e]$$

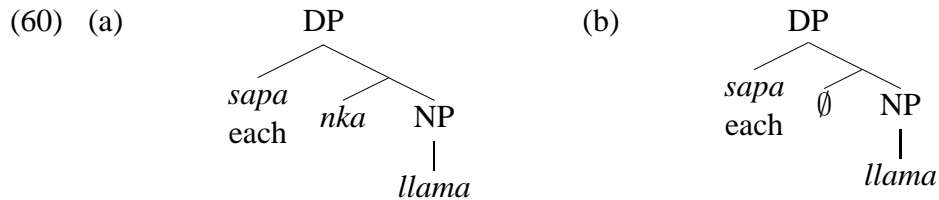
The role of the matching function can be seen clearly in this example: without it, (50) would be true if I ate cracker after cracker and the parrot only happened to come running once, perhaps because the cat had chased it.

In the case of pre-time-adverbial *sapa* we have a similar analysis, with an event reading of the adverbial *p'unchay* 'day' in (58), for example. The interpretation is given in (59).

$$(58) \begin{array}{l} Sapa \quad p'unchay \quad llank'a-ni. \\ \text{each} \quad \text{day} \quad \text{work-1sg} \\ \text{'Each day I work.'} \end{array}$$

$$(59) [\lambda P. [\lambda Q. \forall e P(e) \rightarrow Q(e)]](\llbracket \text{day} \rrbracket)(\llbracket I \text{ work} \rrbracket) = \text{true iff } \forall e, [\text{day}(e) \rightarrow \exists e', I\text{-work}(e')] \wedge M(e')=e$$

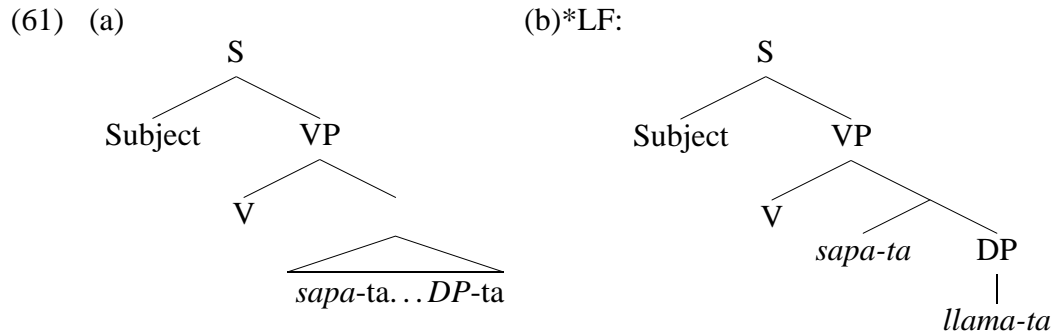
We are now ready to consider the role of *-nka* in *sapa-nka*. I suggest that these *sapa*-affixed versions of *-nka* are syntactic heads which mediate between the adverb-binding *sapa* and the noun which follows. The relevant structure is shown in (60(a)).



When consultants accept a D-quantifier use of *sapa* I suggest a null version of *nka* as shown in (60(b)). These suffixes thus function as type-shifters which effectively convert a noun phrase into an adverbial.

5.4 *So why can't sapa "float"?*

We are now ready to answer the original question posed in this section: why does *sapa* not behave like other strong quantifiers in appearing in discontinuous noun phrases? I propose that the adverbial cannot be accusative-marked independently. Since adverbials cannot be Case-marked, a Case-marked noun with disjoint *sapa* must be understood as a pure DP as in (61(a)). However, in this case the resulting LF configuration would be as in (61(b)).



Without the intermediary level, at LF *sapa* ends up with scope immediately over the DP, which gives us a type incompatibility (*sapa* combines directly with *llama*).

6 Conclusion

This paper set out to address the problem of how discontinuous noun phrases are interpreted in Quechua. The main data arguing for a structure different from a simple reconstruction of external modifiers to “base” position within the DP involved cases in which discontinuous and continuous noun phrases had different meanings. The generalization was that when adjectives or weak quantifiers appeared outside of their noun phrase, in a co-Case-marked position, the overall noun phrase received an indefinite interpretation. Strong quantifiers, however, seemed to have the same meaning in both positions. One apparently exceptional strong quantifier *sapa* ‘each’ was shown to fall outside of this basic pattern because its principal use is as a quantifier over adverbials and not directly over nouns.

I argued that the meanings of continuous and discontinuous noun phrases could be explained by positing an interpretive configuration in which the adjective or quantifier appears outside of the determiner head, which I take to be the head responsible for definiteness. In this sense, I have claimed that the surface position of the modifying element determines its interpretive scope.

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