

Verbal Affix Order in Quechua

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*Memorias del V Congreso de Idiomas Indígenas de Latinoamérica,
6-8 de octubre de 2011, Universidad de Texas en Austin*

Disponible en <http://www.ailla.utexas.org/site/events.html>

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Palabras Claves: CILLA V, verbal affixes, morpheme order, cross-linguistic tendencies, typology, Huallaga Quechua, violation of universals.

1. Introduction

Verbal affixes are morphemes that attach to the verb in polysynthetic languages. They specify concepts such as tense, verbal arguments, mood, voice, and valency. As with any area of linguistic structure, there appear to be cross-linguistic tendencies, in this case with regard to the order of the morphemes.

Cross-linguistic universals of verbal affix order begin with the finding that derivational morphemes occur closer to the root than do inflectional morphemes (Bybee, 1985). With regard to concepts themselves, the generalizations found by Bybee (1985) demonstrate that aspect occurs closer to the stem than do tense, mood or person, and tense occurs closer to the stem than do mood and person, while mood occurs closer to the stem than does person. She explains the ordering of morphemes as reflecting the conceptual closeness (or scope) of the concept they denote to that of the verb root, and comes up with the following hierarchy:

valence > voice > aspect > tense > mood > person/number agreement

According to Bauer (1988), of Bybee's generalisations, the only universals are that aspect is marked closer to the stem than either tense or mood is, and the other generalisations are closer to being tendencies. This means that aspect being marked closer to the stem than tense or mood is in fact exceptionless, at least with regard to all the languages that have been tested for this.

However, it turns out that sometimes languages violate these tendencies for a variety of reasons, which will be discussed below. Quechua is an example of a group of languages that violates the affix order tendencies. This paper will explore the representation of verbal affixes in Quechua and examine the extent to which it follows these generalisations. It turns out that Quechua verbal affixes violate cross-linguistics tendencies with respect to morpheme order.

Muysken (1986: 639) gives a nice comparison of Bybee's universals (a) alongside the Quechua order (b):

* I would like to thank the participants of CILLA V for their suggestions regarding this study; in particular, Dr. Joel Sherzer, Dr. Willem de Reuse, Dr. Rosaleen Howard and Jorge Emilio Rosés Labrada.

Table 1. *Universal Affix Order (a) and Quechua Order (b)*

a. Bybee's Universal Order	b. Quechua Order
ROOT	ROOT
valency	valency (reciprocal, desiderative, causative=)
voice	voice (passive)
aspect	valency (reflexive, benefactive)
tense	aspect (durative)
mood	person object
number	tense
person (subject, object)	person subject
	number
gender	mood

It is clear here that Quechua violates the order, in particular since the person object appears before the tense marker. The purpose of this paper is to compare previous analyses of affix order to see which can best explain the violations found in Quechua.

This paper focuses on the dialect Huallaga Quechua because it appears to represent well the morpheme order of the Quechua languages in general. (Other varieties will also be mentioned.) Examining morpheme order and violations in Quechua will contribute to general understanding of how morpheme order comes about and how and why it can be violated.

2. Typological Background on Morpheme Order

In order to examine violations of universal affix order, it is useful to consider how affix order comes about. As mentioned in section 1, Bybee (1985) makes reference to the conceptual closeness of the morpheme's meaning to the verb. Other explanations of morpheme order include the grammatical or semantic scope of the morphemes (Rice, 1991), or Baker's (1985) mirror principle, in which morphological derivations are analysed as mirroring syntactic derivations. Newmeyer (1992) refers to the iconicity of order, saying that "it is not uncommon for the order of morphemes or words to reflect logical relations among their referents. This is particularly true for scope phenomena..." Mithun (1999: 232) states that "[m]orpheme order might... better be seen as a reflection of the historical sequence of grammaticalisation of affixes". She then goes on to discuss how these varying proposals need not be at odds with one another. If affixes are formed from what were originally separate words, and over time got reduced and incorporated into the verb, then the order of the morphemes can reflect the original word order. The word order in turn would likely have been based on relevance to the verb, or scope. It is logical that the words that became affixes first were those that were closest to the verb, so

the synchronic order of affixes can reflect the order in which sequence of grammaticalisation occurred. According to Mithun, this theory is supported by comparative evidence, which has shown that “those affixes closest to the root are indeed the oldest, and those on the periphery of words can be seen to be more recent additions” (Mithun, 1999: 232).

The next issue is that affixes do not always remain in the same order. Mithun’s main focus of explanation is the movement of affixes that occurs due to the reinterpretation of derivational affixes as inflectional. It is not the case that derivational affixes are always older than inflectional affixes, yet derivational affixes occur closer to the verb stem. This is because affixes are reordered over time. When an affix is reanalysed, it can move to a different position in order to fit in with its new identity.

Haspelmath (1993) describes the movement of an inflectional affix after it gets “trapped” when other postinflectional morphemes (such as a reflexive or an interrogative particle) subsequently become affixes. However, he also specifies that this movement, or the “externalization of inflection”, is a preference principle rather than an absolute constraint. This means that it can tolerate exceptions, if other principles “are in conflict with it and override it”. Haspelmath mentions the concept of local optimization, whereby a morphologically dispreferred form can come into use by an independent change or reanalysis. The point is that grammaticalisation changes can introduce dispreferred forms, which at times are simply accepted, and at other times remedied by such processes as externalization of inflection.

3. Introduction to Quechua

3.1 The Quechua Language Family

Quechua is a family of languages spoken in Peru, Bolivia, and the northwestern part of Argentina. Historical research has divided it into two branches, Quechua I (or Central Quechua, also Quechua B) and Quechua II (or Peripheral Quechua) (Campbell, 1997). It has 6-9 million speakers. The Quechua languages are agglutinative, polysynthetic languages with SOV word order. They have an accusative alignment system, and make use of topic markers. Other features include inclusive and exclusive first person plural pronouns, and verbal suffixes that encode evidentiality.

3.2 Introduction to Huallaga Quechua

Huallaga Quechua is a member of the Central Quechua (Quechua I) branch and is spoken in the department of Huanuco in Peru (Weber, 1996). Weber notes that it is considered a conservative variety due to the fact that it did not undergo as many changes as the varieties that were geographically closer to the so-called ‘prestigious’ pre-Columbian areas.

4. Huallaga Quechua Verbal Affixes

4.1 Types of Affixes

In his grammar of Huallaga Quechua, Weber (1996) describes Quechua verbs as having three types of suffixes: pre-transitional, transitional, and post-transitional (although he then states that perhaps “inflectional complex” would be a more appropriate

term).¹ Pre-transitional and post-transitional affixes are optional, while transitional ones are obligatory, as exemplified below:

Table 2. *Verbal Suffixes in Quechua*

root	pre-trans	transition	post-trans
obligatory	optional	obligatory	optional
<i>maqa-</i>	<i>-yku</i>	<i>-manan</i>	<i>-paq</i>

Pre-transitional suffixes are mainly derivational but also include aspect, as well as the affixes for reflexivity and passivisation (Weber, 1996). Transitional affixes include arguments of the verb as well as tense, adverbs and nominalisers, or, as Hintz (1990) describes, “tense and subject/object agreement”. Post-transitional affixes include case (which is attached to nominalised verbs), evidentials, and some mood affixes.

4.2 Order of the Affixes

The order of these suffixes is best described with reference to each of the three groups in turn.

4.2.1 Order of the Pre-transitional Affixes

The pre-transitional suffixes that tend to come first are those that derive verbs from nouns, for example:

- (1) *Nina qoshpuchaykan aqchanta*
 Nina qoshpu-cha-yka-n aqcha-n-ta
 fire curl-CAUS-IMPF-3 hair-3PL-OBJ²
 ‘the fire made his hair curly’ [Huallaga] (Weber, 1996: 278b)

The suffix *-cha* derives the verb from the noun, so it occurs closest to the root.

Aspectual suffixes tend to occur towards the right, as Weber (1996: 132) describes, “as if they’re trying to occupy the position of a tense suffix” (which is a transitional affix). As well as aspectual suffixes such as iterative and durative, pre-transitional affixes include comitative, directional, passive, and reciprocal. Suffixes that change the lexical meaning of the verb tend to appear next to the stem. There are a

¹ Weber (1996: 125) explains that the term *transition* was used in documents on Quechua from the colonial era, where it was used to refer to possible relations between the subject and object, (for example, one person acting on another) so that it is in fact a semantic term. Weber adopts and adapts the term to refer to a structural group of the verbal morphology.

² Abbreviations used in this paper are: 1=first person, 2=second person, 3=third person, AF=affect, AUG=augmentative, BEN=benefactive, CAUS=causative, CIS=cislocative, COM=comitative, DIR=directional, DS=different subject, EXH=exhortative, INCL=inclusive, IND=independent, FUT=future, IMPF=imperfective, INF=infinitive, OBJ=object, PERF=perfect, PL=plural, PROG=progressive, PST=past, RECIP=reciprocal, REFL=reflexive, SS=same subject, SUB=subordinator, SUBJ=subject.

number of suffixes that can function both as derivational and as aspectual. As would be expected, when functioning as derivational they appear closer to the root and when functioning as aspectual, they appear further to the right.

Weber specifies that there is some flexibility in the order of these affixes, depending on the intended meaning. This relates to the idea of scope. As Weber (1996) describes it, “the meaning of a sequence of n morphemes is the meaning of the first n-1 modified by the last morpheme in the sequence”. These alternative orders will be discussed below.

4.2.2 Order of the Post-transitional Affixes

The order of the post-transitional affixes is generally:

nuance > evidential > postposition

Weber calls the first group *matiz* or nuance particles, and they include “only”, “also”, “now” and “still”. Negatives and interrogatives are included in the paradigm of evidentials here (Weber, 1996). Weber’s “postpositions” include the meanings of “respectively” and “never”. The topic marker *-qa* is also included as a post-transitional affix. Thus the post-transitional affixes seem to encode temporality and general adverbial senses.

4.2.3 Order of the Transitional Affixes

The transitional affixes, as mentioned earlier, indicate subject and object of the verb, where subject can refer to a different clause, tense of finite verbs, or the subordinator of non-finite verbs. (The subordinating suffix indicates that there is also a subordinate clause and it is marked as SS or DS, depending on whether it has a same or different subject from the main clause.) Transitional affixes considered to be “tense” include present, past, perfect, future, imperative and conditional (Weber, 1996).

The order of the affixes is Object > Tense/Subordinator > Subject. An example given is *maqaykamananpaq* “so that he hits me”:

Table 3. *Verbal Suffix Order in Quechua*

root	pre-trans	transition			post-trans
	DIR	OBJ	SUB	SUBJ	
maq-	-yku	-ma	-na	-n	-paq

In full, the order of the transitional affixes is as follows:

obj.1 > progressive > past > fut.1 > imperative > subj.3 > obj.2 > fut.3 > obj/subj.pl > conditional

Already, the fact that the object marker precedes tense is a violation of cross-linguistic universals. An example from Corongo Quechua follows:

- (2) *Wiyamaxunki*
 wiya-ma-xu-nki
 hear-1OBJ-PST-2SUBJ
 ‘You heard me’ [Corongo] (Hintx, 1990: 131)

Nuckolls (1987) has an example from Pastaza Quechua, spoken in Ecuador. Unlike Huallaga Quechua, it is a member of the Peripheral Quechua branch (Quechua II):

- (3) *niwara*
 ni-wa-ra
 say-1OBJ-PST
 ‘He said to me’ [Pastaza] (Nuckolls, 1987: 5)

Also, Parker (1969: 27) on Ayacucho Quechua (also of the Peripheral Quechua branch) notes that “/–sa/ indicates first person future actor.../–wa/ indicates that the speaker [first person] is the object of the action by second or third person.../–su/ indicates (a) first person plural inclusive future...(b) addressee as object of third person action... /–sa/, /–wa/, and /–su/ precede aspect and tense suffixes.”

Once again, person markers are found to be closer to the root than the tense and aspect markers. This is found even in dialects of Quechua from the two separate branches. Interestingly, Parker’s note on Ayacucho Quechua (above) shows that in this variety, it is not only the first person object that precedes tense, which is the case in Huallaga Quechua. In fact, as well as the first person object, both the first person future subject and the second person object of a third person action precede the tense and aspect markers. This finding will be discussed further on. Thus many (if not all) varieties of Quechua show this order, where the first person object precedes tense. So the full order of suffixes is as follows:

Table 4. *Full Order of Verbal Suffixes in Quechua*

Pretransitional	Transitional	Post-transitional
Verbalising Modifying Auxiliary Directional	Object Progressive Past Future 1 st Person Imperative SUBJ 3 rd Person OBJ 2 nd Person Future 3 rd Pers OBJ/SUBJ PL Conditional	Nuance Evidential Postposition

4.3 Alternative Orders

It is important to note that there are alternative orders, which reflect changes in meaning. These changes in meaning are based on the scope of the affix, or what Weber called the “radius of influence” of the suffix.

- (4) *Liguita yachachimanga*
Ligi-y-ta yacha-chi-ma-nqa
read-INF-OBJ learn-CAUS-1OBJ-3FUT
‘He’ll teach me to read’ [Huallaga] (Weber, 1996: 6)

Here, the causative suffix *-chi* has within its radius of influence the infinitive verb.

In the following examples, the causative changes position:

- (5) a. *Aruchishishunki*
Aru-chi-shi-shu-nki
work-CAUS-COM-2OBJ-2SUBJ
‘He’ll make someone else work for you’ [Huallaga] (Weber: 281a)
- b. *Arushichishunki*
Aru-shi-chi-shu-nki
work-COM-CAUS-2OBJ-2SUBJ
‘He’ll make you help someone else to work’ [Huallaga] (Weber: 281b)

Because the causative has a different radius of influence due to its position, the sentences get different meanings.

Another example of this is the pretransitional affix *-yku*, which can appear in different positions depending on how it is being used:

- (6) a. *Kay wallpata wañuchipaykumay*
Kay wallpa-ta wañu-chi-pa-yku-may
this chicken-OBJ die-CAUS-BEN-AF-1SUBJ2OBJ
‘Please kill this chicken for me’ [Huallaga] (Weber: 466b)
- b. *Kay wallpata wañuykuchipāmay*
Kay wallpa-ta wañu-yku-chi-pā-may
this chicken-OBJ die-AF-CAUS-BEN -1SUBJ2OBJ
‘Make them kill this chicken for me’ [Huallaga] (Weber: 466c)

In (6a) the causative marker is nearer the verb, and the sentence is asking the addressee to undertake the action. In (6b) the causative is further from the verb and the addressee is only indirectly involved in the action. This positioning of affixes reflects iconicity, whereby direct causativity is more directly associated with the verb, and indirect causativity is removed from the verb. This movement of affixes can only happen with

certain ones; some are fixed, such as *-mu* “far away”, which must always be as far to the right as possible in the pretransitional zone.

Newmeyer (1992) describes this as the iconicity of scope, whereby “earlier elements take wider scope”. In this case, “earlier” would refer to prefixes, so to generalize, it really means further from the verb root. Or as Muysken (1986) summarises, “if affix p has scope over affix q, it is external with respect to affix q”.

Mithun (1999) gives a nice example of how a different ordering of the morphemes gives different scope and thus a different meaning. This example is from Yup’ik:

(7) *yugpacuaq*
 yug-pag-cuar
 person-big-little
 ‘little giant’
 (Mithun, 1999: 2a)

(8) *yugcuarpak*
 yug-cuar-pag
 person-little-big
 ‘big midget’
 (Mithun, 1999: 2b)

In the first example, *pag* ‘big’ is closer to the noun root, so the more external morpheme, *cuar* ‘little’ has scope over the entire combination up to that point. Thus the more external affix modifies everything up to it.

The Quechua data thus show that there is a certain amount of flexibility in the order of some of the morphemes. This is related to scope and is cross-linguistically relatively common.

5. How Huallaga Affix Order fits with Cross-Linguistic Universals and Tendencies

As mentioned in 4.2.3, the order of the transitional affixes is a violation of universal affix order, because the object marker occurs before the tense marker. It is extremely unusual (perhaps unattested) for a person marker to occur closer to the verb stem than a tense marker. Interestingly, in Quechua this only occurs with a first person object.

According to Muysken (1986), descriptive literature on Quechua affix order has described it as a slot matrix, which means that the affixes are divided into distinct classes, and each class has a slot. For example:

(9) *yachachinakushankupis*
 yacha-chi-naku-sha-n-ku-pis
 know-CAUS-RECIP-PROG-3-PL-IND
 ‘They are teaching it to each other as well’ [Cochabamba] (Muysken, 1986: 9)

Thus the slot description – or templatic morphology, as Mithun (1999) refers to it – means that no slot can have more than one occupying morpheme, and regardless of how many slots are filled, the order of the slots remains the same. However, Muysken (1986) objects to this description because it makes some predictions which Quechua violates, including the fact mentioned above (4.3), that there are alternative orders depending on

the intended reading. Another prediction of the slot description that is violated in Quechua is that there are “cooccurrence restrictions that would have to be stated independently of the slot matrix” (Muysken, 1986: 635) and also the fact that there are instances of the same morpheme occurring twice. Although Muysken’s paper is based on Cochabamba Quechua, the same remark applies for other dialects, including Huallaga. Weber (1996) gives just such an example, where the causative morpheme is used twice:

- (10) *Curuta wañuchichisha Juanwan machëtinwan*
 Curu-ta wañu-chi-chi-sha Juan-wan machëti-n-wan
 snake-OBJ die-CAUS-CAUS-3PERF Juan-COM machete-3PL-COM
 ‘He made Juan kill the snake with the machete’³ [Huallaga] (Weber, 1996: 572)

So it seems the slot matrix analysis has some shortcomings with regard to Quechua morphemes. Muysken then suggests that there is no suitable template for Quechua, and that the morpheme order simply arises from a combination of factors. This will be described in section 6 below.

Mithun (1999) mentions that besides the slot or templatic structure there is also a layered or hierarchical structure that can describe morpheme order. The layered structure is different from the slot structure in that each newly-added affix is seen as adding to a new stem which includes the previous affix. This approach may be more useful for Quechua, for a start because it is a more functional explanation of the scope of each affix.

In sum, although there is more than one possible way of describing affix order in Quechua, none of these explains how the order may have come about, especially with regard to the apparent violation of universal affix order. This will be explored in the following section.

6. Explanations of Affix Order and Violations

6.1 Explaining Quechua Affix Order

The proposals described in section 2 may hint towards possible explanations for the violations in Quechua affix order. Haspelmath’s preference principle suggests that there may be a conflicting principle that is overriding the externalization of the inflectional affix. However, it is not clear what this principle might be in Quechua.

Another explanation, based on Mithun’s theory of affixes moving when they get reanalysed, might illuminate the Quechua problem. It may be possible that the first person object marker on the verb is the remaining member of its paradigm in its original position. Perhaps it will undergo movement to the position further from the stem, where the other object markers are found. It may be that what was originally an incorporated pronoun – which, being an argument, would clearly be very close to the verb – is becoming an agreement marker. This could explain why all the object markers except the first person are already external. Perhaps this asymmetry reveals a change that is ongoing.

³ However, J. E. Rosés Labrada pointed out that the use of “die-CAUS” to mean “kill” might be a grammaticalised form, as this would not be typologically uncommon. Thus a further example of a double causative would be necessary to exemplify the same morpheme being used twice.

This explanation also fits in with the mirror principle, whereby the original affix order reflects the previous word order.

Parker's (1969) description of Ayacucho Quechua adds interesting information to this argument. As mentioned in section 4.2.3, this variety of Quechua has a number of subject and object markers of first and second persons that precede the tense and aspect markers. This suggests that a reordering has taken place in the language. It appears that most varieties of Quechua have moved all but the first person object marker, but this variety has retained a number of person markers closer to the root. Since person markers are inflectional, it would be unlikely that these have been moved closer to the root, since derivation tends to be closer to the root than inflection. Thus it seems more likely that the other markers have moved further from the root, and the first person marker (and more in the case of Ayacucho Quechua) have remained in their original position.

This raises the question of why some of the person markers have remained while most have moved. It is possible that the marker(s) closer to the root has somehow been reanalyzed and crystallized in this position.

One example from Muysken (1986) shows a case in which the subject-object combination exhibits an unexpected pattern:

- (11) a. riku-wa⁴-nki
see-1OBJ-2SUBJ
'you see me'
- b. riku-wa-n
see-1OBJ-3SUBJ
'he sees me'
- c. riku-nchis
see-1SUBJ.PL.INCL
'we see'
- d. riku-wa-nchis
see-3SG.SUBJ-1PL.INCL.OBJ
'he sees us'
- [Cochabamba] (Muysken, 1986: 23)

The expected reading of (11d) would be "we see me" but this would be ungrammatical, and thus the sentence takes on a completely unexpected meaning, "he sees us". This idiosyncrasy may be a clue that Quechua verbal affixes have changed their meaning over time, or have become reanalyzed depending on their position. The fact that this occurs synchronically in order to avoid ungrammaticality shows that it is a feature of the language. It is possible that the first person object marker has been reanalyzed.

⁴ Note that the first person object marker alternates between *ma* and *wa*, depending on the variety in question. This example is from Cochabamba Quechua.

Hay and Plag (2004) state that affixes are ordered in a hierarchy of complexity, with affixes that are more segmentable or separable at one end and those that are less separable at the other end. Since a first person object is not as common in discourse as perhaps the first person subject or other person markers, it may be that it is not as segmentable as other affixes and perhaps has to be analysed together with other morphemes, such as the verb root.

In his description of Siberian Yupik Eskimo, de Reuse (1988: 134) notes that “lexicalized sequences of Eskimo postbases often turn out to contain elements with anomalous scopes”. This ties in with the idea that an unexpected affix order has been reanalysed or lexicalized.

Muysken (1988) comes up with a different way to analyse affixes. He divides the morphemes into derivational, syntactic and inflectional. He claims that the derivational affixes are more intimately associated with the verb root and cannot follow each other. The syntactic affixes follow the derivational affixes, can freely combine with each other, but cannot follow the inflectional affixes. The inflectional affixes can follow the other affixes, but are “rigidly ordered among themselves” (Muysken, 1988). He presents it thus:

Table 5. *Muysken’s Analysis of Affixes*

ROOT	DERIVATIONAL	SYNTACTIC	INFLECTIONAL
	lli “transform into x”	pa / pa...ku BEN	
		na / pu...na RECIP	
	ya “become x”	ri DIM	
		ykacha “to and fro”	
	na “put in x”	rpari DIM	ku REFL
		paya DIM	mu CIS
	cha “make x”	naya DESID	pu BEN
		schi “help”	
	naqa “try”	chi CAUS	
		yu AUG	
	raya “permanence”	ru EXH	

This approach explains some of the flexibility in affix order, in that the morphemes in each slot can be rearranged with regard to scope, but does not deal with the violation caused by the position of the first person object marker. However, the flexibility in affix order is certainly a clear feature in many, if not all, varieties of Quechua, and suggests that the violation of universal affix order might simply be a quirk of the language, an exception to the tendency. The flexibility itself is not unusual, but perhaps the fact that it is so flexible in Quechua has given rise to an opportunity for the violation of affix order.

Adelaar (1982) discusses changes in Quechua suffixes and refers to the “instability of [its] morphological structure”. The explanations mentioned include sound

change, substitution of suffixes, changes in order of cooccurrence and semantically motivated changes. Changes in order of cooccurrence are represented by the following example, which shows how two dialects differ in terms of affix order:

- (12) a. miku-rka-ya-n
eat-PL-PROG-3SUBJ
'they are eating' [San Pedro de Cajas]
- b. miku-ya-lka-n
eat-PROG-PL-3SUBJ
'they are eating' [Chongas Bajo] (Adelaar, 1982: 10)

This supports the argument that a change of order took place somewhere in the history of the language. This, together with the idiosyncratic meaning of the ungrammatical form in (11d) could suggest that the synchronic order of morphemes is an interim stage in a process of reordering. More comparison of varieties of Quechua, and historical reconstruction, could shed light on this. However, the fact that it appears in both branches of the Quechua language family suggests that it is an old feature, and that movement of the other person markers may have taken place. Further investigation into the discourse context could also help to understand this puzzle. It seems that this affix order is the obligatory order in each variety and does not represent a marked form.

7. Conclusion

The above theories and examples indicate that the violation of universal affix order found in Quechua may be the remnant of reanalysis of person marking morphemes, and an intermediate step in a reordering process. Huallaga Quechua is typical of the Quechua languages in this feature, which challenge previously held notions of affix order universals and tendencies. New approaches to affix order and how it occurs and changes over time will help to explain this feature of Quechua. On the other hand, more investigation of little-studied languages may show that this affix ordering is not unattested, which would indicate that it is our current theory of affix order that is at fault. In any case, the fact that this order occurs so widely in Quechua shows that there is nothing about it that is unanalysable to speakers and hearers and that it is not as functionally inefficient as cross-linguistic tendencies would lead us to believe.

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