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0. Introduction

One of the persistent problems in Quechua morphology is the interpretation of the particle *mu*, which occurs on many verbs as part of the so-called derivational suffix system. Here we will discuss this problem in some detail, arguing that the meaning of *mu* cannot be studied in isolation, but needs to be seen in terms of the perspective of the speaker on time, space, and her or his relation to the hearer and other participants. Thus *mu* poses a serious problem for a theory that handles morpheme interpretation as separate from the actual speech act.

We will begin our analysis, which is based on data collected with speakers from Cuzco (Peru) and Sucre (Bolivia), both Quechua II dialects (Torero 1974) and closely related, by describing the various meanings ascribed to *mu* in the literature. In section 2 we will discuss a syntactic analysis and show why this account is inadequate; at the same time we will present the basics of our own analysis. We will give a general interpretation of *mu*, covering its various occurrences, in section 3. Section 4 is devoted to the implications for the organization of the grammar.
1. Traditional accounts of the meaning of mu

Most accounts of verbal morphology in the Quechua descriptive literature distinguish a number of different 'meanings' for *mu* for different verb classes. In Cusihuaman (1976), for example, four different uses are mentioned:

1.1. Non-motion verbs

According to Cusihuaman (1976: 214) the addition of *mu* to a non-movement verb "indicates that the action is realized in a different place from where the speaker and hearer are." As is shown in (1) and (2), *mu* is marking movement away from the speaker with non-motion verbs: 'to go and ... elsewhere':

(1) qara- ya- ra- mu- nki
    serve INT INT MOV 2
    'You are going to serve (her/him).'

(2) mikhu- mu- saq
    eat MOV 1FU
    'I am going to eat (over there).'

The actions of serving and eating take place after the subject has moved somewhere away from the speaker.

1.2. Motion verbs

With motion verbs which according to Cusihuaman also include "verbs of transfer, communication, shifting and projection" (Cusihuaman 1976: 213) the opposite happens. Compare (3) and (4). In (3) the action of taking is neutral in its spatial orientation (as long as it not towards the speaker), while in (4) the action is directed towards the speaker:

(3) apa- n
    take 3
    'He takes.'

(4) apa- mu- n
    take MOV 3
    'He brings.'
This interpretation is quite strict, as can be seen from the ungrammaticality of (5) as opposed to that of (6). As the speaker is in Cuzco, it is impossible for him to be in Puno at the same time.

(5) *Punu- man chaya-mu- nqa (being in Cuzco)
   Puno to arrive MOV 3FU

(6) Punu- man chaya-nqa
   Puno to arrive 3FU
   ‘He will arrive in Puno.’

It must be noted that in the case of verbs of transfer in which the ‘theme’ is moving, it is this argument which is in the scope of mu, cf. (7):

(7) carta- ta kacha- mu- wa- n
    letter ACC send MOV 1OB 3
    ‘He sends the letter to me.’

1.3. Weather verbs

Further we get mu with weather verbs such as chiri ‘be cold’, for which Cusihuaman doesn’t give a clear semantic interpretation:

(8) chiri- ykacha- mu- sha- n- mi
    be.cold DISTR MOV DUR 3 AF
    ‘It is cold again and again.’

(9) wayra phuku- mu- n
    wind blow MOV 3
    ‘The wind is blowing.’

Here the interpretation, we will argue below, is that the climatic condition is or starts affecting the immediate environment of the speaker: ‘here’ as opposed to ‘somewhere in the universe’.

1.4. Verbs of outward movement

Finally we encounter mu in combination with “actions that proceed from the interior, be it of the body, of an object, the earth, or water” (Cusihuaman 1976: 214). This class includes two separate cases, we will want to argue below. In both
cases 'ego' is becoming aware of a sensation, but a distinction has to be made whether he or she is affected by a force from the inside, as in (10) and (11):

(10) chilchi- ra- mu- n
    fester INT MOV 3
    '(Pus) is coming out.'

(11) yarqa- mu- wa- n
    hunger MOV 1OB 3
    'I was getting hungry.'

or from the outside, as in (12):

(12) pampa- manta- n k'allampa- qa phata- mu- n
    earth from AF mushroom TOP sprout MOV 3
    'The mushrooms sprout from the earth.'

2. Bills' syntactic treatment of mu

Since G.D. Bills' article *The Quechua Directional Verbal Suffix* appeared in 1972 his analysis that the insertion of *mu* is dependent on a certain syntactic environment has been widely accepted in Quechua linguistics as a proof of the necessity of a syntactic analysis for many morphological phenomena (Cerron-Palomino 1987: 131). We will show that analysing *mu* as a directional affix is on the wrong track, and that the syntactic analysis of the suffix *mu* which Bills proposed is inadequate. In his analysis Bills covers only three of the four verb types that have been distinguished by Cusihuaman. He makes a distinction between a cislocative and a translocative function dependent on the fact whether the suffix *mu* combines with a movement verb or a non-movement verb, and analyses the weather verbs as a special kind of movement verbs.

2.1. Movement verbs

Using the deictic characteristics of the Quechua demonstratives, with *kay* as the [+proximate] and *haqay* as the [-proximate] form, Bills argues that with movement verbs *mu* is syntactically related to a goal of motion which has to be identical to the speaker-hearer location, a 'directional-goal-proximate':

"When a verb of motion occurs in association with a directional-goal-proximate noun phrase, the cislocative *mu* is added to the verb." (Bills 1972: 4).
In (13-16) it is clearly shown that the relative position of the speaker is basic in the cislocative interpretation of *mu* with movement verbs:

(13) (kay- man) kuti- mu- nqa  
    (this to) return MOV 3FU  
    ‘He will come back (to this place).’

The proximate demonstrative in (13) shows that the direction of motion is towards the speaker. The obligatory character of *mu* insertion, when the direction is speaker-oriented, is shown in (14):

(14) *kay- man kuti- nqa  
    this to return 3FU

The interpretation of the basic verb *kuti* - ‘return’ is thus always movement away from the speaker, as the -proximate demonstrative shows, cf. (15):

(15) haqay- man kuti- nqa  
    that to return 3FU  
    ‘He will go back to that place.’

In Bills’ opinion these facts prove that "all surface structures containing cislocative *mu* are derived from deep structures containing a directional-goal-proximate noun phrase" (Bills 1972: 6).

2.2. *Non-movement verbs*

The translocative use, i.e. the directional interpretation, of *mu* is shown in (16) and the obligatory [-proximate] interpretation of the locative NP by the ungrammaticality of (17):

(16) haqay- pi mikhu- mu- nqa  
    that LOC eat MOV 3FU  
    ‘He will go eat over there.’

(17) *kay-pi mikhu-mu-nqa

Non-movement verbs do not become movement verbs by the affixation of *mu* since they require a locative marked NP as complement and do not allow for a directional complement marked with *man*, cf. (18):

(18) *haqay-man mikhu-mu-nqa
It seems then that a non-movement verb with a [-proximate], directionally interpreted, locative NP complement requires the insertion of *mu*. The problem is however that (16) without *mu* is also grammatical, cf. (19):

(19) haqay- pi mikhu- nqa  
that LOC eat 3FU  
'He will eat over there.'

As Bills notes there is a semantic difference between (16) and (19). While "sentence (16) implies that the subject will move to the location where the eating takes place; sentence (19) carries no such implication --- the subject may or may not already be at the place where the eating will be done" (italics ours) (Bills 1972: 7). It is here that his analysis runs into problems. To differentiate between these interpretations he assumes that there are two types of locational noun phrases, one which implies prior motion and one that does not, in his terminology a 'goal locational' noun phrase and a 'non-goal locational' noun phrase. Assuming this ad-hoc distinction of which he says himself in a note "just how this distinction arises is a thorny question that I choose to avoid for the moment" (Bills 1972: note 6), he can syntactically derive the insertion of translocative *mu*:

"When a non-motion verb occurs in association with a locational-goal-nonproximate noun phrase, the translocative *mu* is added to the verb." (Bills 1972: 8)

Besides the problem of assuming two different locational NPs, a goal and a non-goal variant, we are confronted with the fact that in (19) Bills analyses the complement NP as a non-goal locational NP. It can, however, be interpreted as a goal locational noun phrase as well. This sentence can express that the subject is not yet at the place of eating (see italics above), and in this interpretation it would be the right environment for the insertion of *mu*. The only way to save his analysis would then be the very unlikely assumption that it is the compulsory character of the movement which triggers the affixation of *mu*. This would then account for the contrast between (16) and (19).

In our opinion Bills missed the point as he did not note the essential characteristic of *mu* that is to say that it expresses bi-locationality vis à vis the speaker. In our view *mu* indicates that there are two places presented in the speech act, one of which is the position of the speaker. Such an analysis explains the fact that also with the non-movement verbs *mu* always focuses on the relative position of the speaker.

In our analysis of (16) the speaker expresses that the third person subject is in his vicinity at the moment of speaking. In contrast to Bills we analyse *haqay-pi* 'there' as a normal locative noun phrase, and *mu* expresses that the subject is at the moment here but will do his eating over there; the movement is only a
consequence of the fact that the subject is not yet at the place of eating. In (19) the absence of mu expresses explicitly that the subject is not here (otherwise (16) would have been the appropriate form), the subject is at another place, which might be the place where the eating will occur. A visual presentation of the different interpretations is presented in (20):

\[
\begin{align*}
\text{(20)} & \quad \begin{array}{c}
19 \quad \begin{array}{c}
\text{he, eating} \\
\text{speaker}
\end{array} \quad \rightarrow \quad \begin{array}{c}
19 \\
\text{he} \quad \rightarrow \quad \text{eating}
\end{array} \quad \begin{array}{c}
21 \quad \text{eating} \\
\text{speaker, he}
\end{array}
\end{array}
\end{align*}
\]

Here the limitation is felt of Bills’ explicitly limiting the analysis to third person future tense main sentences. Would he have included past tense sentences he might have noted the shortcomings of his analysis, cf. (21):

\[
\begin{align*}
\text{(21)} & \quad \text{mikhu- mu- ra- n} \\
& \quad \text{eat} \quad \text{MOV PA 3} \\
& \quad \text{‘He ate over there (after eating there he is now here).’} \\
& \quad \text{‘He went to eat’}.
\end{align*}
\]

In past tense sentences mu does not express movement away from the speaker as Bills’ analysis would predict, but exactly the opposite. What mu expresses in (21) is the fact that the subject is in the vicinity of the speaker after being in another place\(^5\). The bilocational character of mu implies that in the past the subject was at another place performing an action, i.e. eating. The movement from there to the position of the speaker is a logical consequence of the bi-locational, speaker included, character of mu. The representation in (20) is the same for sentence (21) as for (16); the location of speaker and subject of the sentence overlap, and the action took place in another location. Only the direction of movement is reversed.

2.3. Weather verbs

Confronted with the fact that the only possible interpretation of mu when combined with weather verbs is its cislocative meaning Bills has to conclude that weather verbs are a special kind of movement verbs. Semantically this might be imaginable, but Bills does not to seem to realize that there is an important syntactic argument which speaks against such an analysis in his framework: weather
verbs do not allow for directional NP complements, they may only be combined with locational NP complements, cf. (22):

(22) ayllu- y-pi mana kunan- kama para- n-chu
village 1 LOC not now until rain 3 NEG
'It didn’t rain in my village until now.'

On the basis of Bills’ rules one cannot generate (23) since there is no directional goal which can trigger the insertion of *mu*:

(23) kay-pi walej-ta para- mu- sa- n
this LOC good ACC rain MOV DUR 3
'It is good that it is raining here.'

In our analysis the cislocative interpretation of *mu* with weather verbs is not the expression of movement per se but the consequence of the fact that there are two locations, one of which is the speaker’s. In (23) the speaker expresses that it was raining in another place but that now it is raining in his direct vicinity.

3. A general interpretation of *mu*

In our view the movement facts which have been discussed above are only one instance of the possible interpretations *mu* can have. An interpretation of sentence (23) which is somewhat different from the one presented above focuses more on the effect on the speaker. In this interpretation (23) could express that the speaker is becoming wet while the form without *mu* would be used by someone who looks out of the window without a special interest in the fact that it is raining. A farmer whose crops haven’t seen any rain for a month would however use the form with *mu* to express his personal involvement (Bills et al. 1969: 206; Stark 1971: 166). It might be clear that the notion of motion is secondary in these cases. Central, in our opinion, in these cases is the expression of the speaker that he or his consciousness (‘ego’) is affected from the outside.

The fourth way of using *mu* distinguished by Cusihuaman, which is not treated by Bills and which wouldn’t fit in his model, expresses the opposite of the above interpretation. In this case *mu* expresses that something which is inside comes to the surface. This might be the body of the speaker as in sentence (10), but also his consciousness as is shown in (11), repeated here for convenience:

(10) chilchi- ra- mu- n
fester INT MOV 3
‘(Pus) is coming out.’
Quechua \textit{mu} and the perspective of the speaker

(11) yarqa-\textit{ mu}- wa- n
\textit{hunger MOV 1OB 3}
'I was getting hungry.'

This diversity of interpretation can be accounted for by introducing the following locational model of the world: the human individual 'ego' is placed in the universe and can be split in a 'known' outer circle, sensation and consciousness, and an 'unknown' center. This can be represented in the following way:

(24)

\begin{center}
\includegraphics[width=0.5\textwidth]{locational_model.png}
\end{center}

We consider consciousness and sensation as the locational layer which can be stimulated from the inside or the outside, and the function of \textit{mu} is marking explicitly that there is a bi-locational relation and that such a stimulus, involving two places, has taken place.\footnote{While this model might be very clear for the last two interpretations of \textit{mu}, it is not immediately clear how the movement and non-movement verbs fit in. Since we have to do with verbs that describe actions in the real world, it is better to speak about perception field instead of consciousness and sensation. It is immediately clear that all the examples of the movement as well as of the non-movement verbs, presented thus far, can be interpreted in terms of movement in relation to the perception field of the speaker.}

As we have said above while discussing the classification of Cusihuaman, we wanted to treat the verbs of outward movement as two different cases. The verbs that were analysed above indicate the awareness of a force from the inside, the other verbs that were assigned to this class indicate the awareness from a force from the outside, cf. (12) (repeated for convenience):

(12) pampa-\textit{ manta- n k'allampa- qa phata-mu- n}
\textit{earth from AF mushroom TOP sprout MOV 3}
'The mushrooms sprout from the earth.'
Another example which clearly shows this interpretation of *mu* is (25):

(25) radiyukay-kama uyari- ka- mu- n
    radio this until hear RE MOV 3
    'The radio can be heard over here.'

By their interpretation these verbs come quite close to the interpretation of the movement verbs, in that they express that something is happening in another place which comes into the perception field of the speaker, and hence the bi-locational character of *mu*.

We argued that the location of the speaker is central for the interpretation of the suffix *mu*. One rather often encounters examples, however, in which the domain of reference for their interpretation is not the actual location of the speaker. In telling stories and in describing situations in the past, the speaker can create a virtual domain of reference, cf. (26):

(26) Sukri- pi ka- sha- qti- y chaya- mu- rqa
    Sucre LOC be DUR DIS1 arrive MOV 3PA
    'When I was in Sucre he arrived there'

At the moment of speaking the speaker is not in Sucre but by introducing his being there in the past he has shifted the domain of reference which is relevant for the interpretation of *mu*.

A very intriguing example, which we speculatively want to interpret in the same way, is presented in (27):

(27) warku- raya- mu- n
    hang PERM MOV 3
    '(A sign) is hanging here (for people to notice).'

In this case we want to argue that there is not one domain of reference, but as many domains as there are persons passing the sign whose perception field might be affected by it.

4. Implications for the organization of the grammar

We would like to end with a brief discussion of what our analysis of *mu* entails for the way we must envisage that meaning is expressed in linguistic form. Minimally, the analysis forces us to make three assumptions:
Quechua mu and the perspective of the speaker

(a) The grammar must include a level at which the perspective of the speaker can be represented as a central organizing principle.

(b) Temporal and spatial reference must be intricately related so as to yield the right interpretation for the assertion of bi-location that *mu* expresses.

(c) One must be able to characterize verbs in terms of the feature \([\pm\text{ motion}]\), even when these verbs have a non-moving agent.

In summary, the evidence from Quechua that we have presented suggests that spatial organization must be a fundamental principle in the conceptual organization of the grammar.

NOTES

* In the light of Simon Dik’s ongoing interest in lexical semantics (Dik 1969, 1989), we hope he will appreciate this paper. It was written to further our knowledge of the intricate link which exists between the grammar and extra-linguistic knowledge, a link which we feel has always been central to Dik’s concerns in linguistics.

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<table>
<thead>
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<th>INT</th>
<th>Fu</th>
<th>Ob</th>
<th>DUR</th>
<th>Top</th>
<th>Neg</th>
<th>RE</th>
<th>PERM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intensifier</td>
<td>Future</td>
<td>Object</td>
<td>Durative</td>
<td>Topic</td>
<td>Negation</td>
<td>Reflexive</td>
<td>Permanence</td>
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<td>ACC</td>
<td>DISTR</td>
<td>AF</td>
<td>LOC</td>
<td>DIS</td>
<td>PA</td>
<td>BEN</td>
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<tr>
<td>Movement</td>
<td>Accusative</td>
<td>Distributive</td>
<td>Affirmative</td>
<td>Locative</td>
<td>Disjoint</td>
<td>Past</td>
<td>Benefactive</td>
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</table>

Like many languages, Quechua has two main verbs to express movement towards and movement away from the speaker/hearer. The verb *ri- ‘go’ always involves movement away from the speaker, and hence (i) is ungrammatical:

(i) \(*ri- \text{ mu- ni go MOV 1 ‘I go (here).’}\)

The Quechua verb for ‘come’, *hamu-*, contains the suffix *mu*, but it cannot be used without it, as shown in (ii):

(ii) \(*ha- \text{ ni go? 1 ‘come (here).’}\)
Evidence for the splitting up of *ha-mu*- is provided by a morpho-phonological rule in Quechua, i.e.

(iii): *mu* is reduced when followed by benefactive *pu*:

(iii) \[ \text{mu} \rightarrow \text{m} \]

This rule also applies in the verb *hamu*- as shown in (iv):

(iv) \[ \text{ha(-)m-pu- ni} \]
\[ \text{come BEN1} \]
\[ \text{‘I come for ...’} \]

In Dutch we find *gaan* 'go' en *komen* 'come'. In their basic uses the inherent directedness can be seen in the following contrast:

(v) Simon komt *daar/hier direct heen
\[ \text{‘In a minute Simon is coming *there/here.’} \]

(vi) Simon gaat *hier/daar direct naar toe
\[ \text{‘In a minute Simon is going *here/there.’} \]

The complicated semantics of these movement verbs, and their speaker/addressee dependency is shown in (iii) en (iv):

(vii) Simon komt direct naar je toe
\[ \text{‘In a minute Simon will be coming to you.’} \]

Although ‘Simon’ is moving away from the speaker, this sentence is correct in a telephone conversation, since ‘Simon’ is moving towards the addressee.

(viii) Pieter komt morgen ook naar Holysloot
\[ \text{‘Tomorrow Pieter will also come to Holysloot.’} \]

This sentence is correct on the assumption that it is uttered by one of the co-authors to the scholar honoured in this volume, that is to say that either the speaker or the addressee will be in Holysloot the following day.

2. With non-motion verbs *mu* is introducing another location besides the one where the speaker and the subject are. Motion verbs are inherently bi-locational and one could ask why it is the goal and not the source which is associated with the speaker after the affixation of *mu*, i.e. why we don't get (i):

(i) \[ *\text{kay- manta puri-mu- rqa- n} \]
\[ \text{this from walk MOV PA 3} \]
\[ \text{‘he went from here’} \]

We will rely on the semantic hierarchy which says that ‘goals’ are higher than ‘sources’, although this is not a very convincing argument in this case.

3. Note that although the subject at the moment of speaking is in the vicinity of the speaker one cannot use the proximate form ‘kay-pi’. It is clearly the place of the act of eating which is determining the deictic character of the locational NP.

4. Willem Adelaar, in a recent article (to appear), phrases this as "verbs referring to a development of which the result is more familiar to the speaker than the initial situation" and gives the following categorization:
Quechua mu and the perspective of the speaker

(i) non-existing to existing pacarimu- 'come into existence'
not living to living yurumu- 'be born'
invisible to visible ricurimu- 'appear'
silent to speaking rimarimu- 'speak up'
rolled-up to spread-out pachayamu- 'explode'
few to numerous mirarimu- 'increase in number'

The first five cases can easily be interpreted in terms of 'coming into the perception field of the speaker'; the last case, from 'few to numerous' might be interpreted in terms of an implicit norm holding for states of affairs, a notion Dik (1969) explored.

REFERENCES


