

MORPHOLOGICALLY CONDITIONED CHANGES IN WANKA-QUECHUA

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0. Purpose. The purpose of the present paper is twofold: (a) to provide evidence that shows the existence of genuine grammatically conditioned sound changes; and (b) to construct a working hypothesis to the effect that certain rules can become generalized from derived to non-derived environments in the Kiparskyan sense. With these two goals in mind I shall present a number of instances of phonological change affecting certain grammatical categories only, and at the end it will be shown that some of these changes which began affecting suffixes, only after eroding them propagate by generalization to the entire system. The data used come from the Wanka variety of Quechua. For each change I will try to delimit its exact distribution interlectally as well as intra-systematically, and references to similar changes attested in other Quechua lects will also be made.*

0.1. Lectal and Geographic Location. Wanka-Quechua is a variety that belongs to one of the main branches (Quechua I) into which the Quechua language family is divided. It is spoken on the Central Highlands of Perú, along the Mantaro Valley, covering roughly three provinces of the Department of Junín (from South to North, Huancayo, Concepción, and Jauja). This variety consists of at least three lects¹ called (from South to North) Waylla-Wanka, Waycha-Wanka, and Shawsha-Wanka; these lects correspond roughly to the political division among the three provinces mentioned above. Each lect, on the other hand, appears fragmented with respect to the treatment of a number of phonological rules. This peculiar situation makes it difficult -- if not impossible -- to establish relatively discrete varieties within the supralectal entity which we call Wanka (itself an abstraction defined on the basis of certain shared rules) unless one embraces the rather unrealistic approach to language variation, namely the so-called static paradigm, as opposed to the dynamic model² practiced by the variously called sociolinguists, variationists, etc. Thus, it should be remarked at this point that the variety we are concerned with is a highly fragmented entity. In fact, the lectal differentiation is so

strong that, to speak solely of the regional variation, not only do we see differences from region to region but also from town to town, from one village to another. As far as intelligibility is concerned, I must say that, in spite of the surface differences, the speaker of different communotects understand each other (although certain degrees of asymmetry can be detected), being almost all of them, literally speaking, polylectals. This knowledge on the part of the speakers is, I think, an aspect of their linguistic competence, and we would like to capture precisely this knowledge, since that is the goal of a linguistic description. To this effect, one only needs to compare the varieties among themselves and thereby establish the basic grammar from which, by means of rules of lectal differentiation, we can derive the actual pronunciation for each variety. Thus in the remainder of this paper I shall assume the correctness of a panlectal grammar, as opposed to an idiolectal grammar, without further discussion³.

1.0. Grammatical Information and Sound Change. That some synchronic phonological rules require, in order to be formulated, certain categorial information has largely been accepted (sometimes by way of analogy) even by those who followed closely the strong version of the neogrammarian view that sound change takes place only in purely phonetic environments. This is because in an historical perspective it is generally the case that most of the grammatically conditioned rules were originally phonetically motivated, and as such do not contradict the "regularist" view of sound change. On the other hand, the possibility of a sound change morphologically conditioned from its very beginning was rejected, since this goes against the very heart of the neogrammarian doctrine. However, there can be no doubt that phonological change can take place in nonphonetic environments; in fact the notion of word boundary was largely invoked, although most of the times under the disguise of "phonetic pauses". It is because of the existence of a wide array of evidence that shows the grammatical conditioning of certain phonological rules that generative grammar maintains the view that sound changes cannot always be stated in strictly phonetic terms, and therefore this model has more empirical validity, as opposed to other theories strongly limited by what Chomsky has called the "local determinacy" principle. Here it should be noted however that even if we know that the strong version of the neogrammarian view is empirically incorrect, it can hardly be disposed

of entirely, since its value as a heuristic principle is out of question. This is because, as Anttila (1972:79) observes, "even if it is easy to formulate a grammatically conditioned sound change, it need not be historically correct". As we have said, synchronically, certain grammatically conditioned alternations are the by-product of earlier perfectly phonologically motivated rules. This seems true, for example, of the Iroquian sound changes reported by Postal (1968: Chap. 11) which were then presented as evidence for the disconfirmation of the neogrammarian theory of sound change. Postal claimed that among certain Iroquian languages perfectly regular sound changes can be grammatically conditioned in origin. However, Kiparsky (1973) demonstrated quite convincingly that the Iroquian case discussed by Postal is actually "irrelevant to the neogrammarian hypothesis, as it is not an example of sound change at all, but rather an instance of the generalization of rules". This of course does not mean that there are no morphologically conditioned sound changes, but only that we may not talk easily of grammatically conditioned changes unless we have exhausted carefully all the possible phonetic conditioning factors. Thus, as King (1969:138) remarks, "we should act as if every phonological change were at most phonetically conditioned".

Granted the existence of nonphonetically conditioned sound changes, it is however remarkable that, to our knowledge, most of the examples provided in the literature are cases of inhibitory changes, exceptions to regular sound changes, such as prevention of homophony, or retention of categorial distinctions (gender, number, case, etc.). The reason for this may be: (a) that uncontrovertible instances of grammatical conditioning as causing primary change are hard to find; and (b) that more often than not people have carelessly invoked nonphonetic conditioning for phenomena they could not explain otherwise (the Iroquian example cited above would be a good case in point).

Below I present a number of cases of apparently genuine grammatically conditioned changes. If they are so, then here we have good instances of changes that contribute to the disconfirmation of the neogrammarian view of sound change in its strong version.⁴

1.1. Glottal Absorption. In a relatively recent study⁵ I have presented in detailed fashion the evolution of */q/ among the Waylla and Waycha lects

(called together henceforth Ya?a-Wanka, because here ya?a is the root for the first person pronoun), leaving aside the treatment of the same proto-phoneme in Shawsha-Wanka (called henceforth Nuha-Wanka, because here nuxa is used instead of ya?a), since its reflex /x/ is found regularly with some minor changes (cf. 2.1. below). The treatment of */q/ among the Ya?a-Wanka lects is interesting in a number of respects. Historically, the rule involved was:

$$(1) */q/ > \left\{ \begin{array}{l} \emptyset/\# \text{ ---} \\ /?/ \end{array} \right\}$$

and the actual realization of /?/, according to the seven lects (ranging from A to G) which I have identified (see 2.1. below), is subject to certain phonological rules, each of which can be considered a further step in the change with respect to the former, showing us a clear case of a sound change in progress. The way this change propagates will be illustrated in the second section of this paper. For our present purposes we only need to introduce the treatment of the glottal stop in lect B, since A is the most conservative in that it preserves the output of rule (1) unchanged.

1.1.1. Geographic Distribution. This lect covers approximately the territories of the districts of Sapallanga (including the locality of Miluchaca) and Huayucachi (excepting the localities of Miraflores and Huamanmarca), both located at the southern border of the Mantaro valley, in the province of Huancayo.

1.1.2. Morphological Conditioning. In lect B it can be observed that the output of rule (1) is maintained in careful speech, B thus being in this sense similar to lect A. In colloquial speech however we have the following situation:

- (2) [átu] 'fox'
 [yúla] 'white'
 [ču?íu+ka] 'the corn'
 [wa?la+ña] 'it used to hook'

which in careful speech corresponds to (2a), respectively:

- (2a) [átu?]
 [yúla?]
 [ču?íú+ka?]
 [wa?lá+ña?]

Thus, to give an account of this fact, we may formulate the following rule (leaving aside certain details which are irrelevant for our present discussion):

(3) /ʔ/ → (∅) / — #

(where the use of parentheses indicate the stylistically controlled nature of the rule). However, in view of (4) it will be seen that rule (3) is inadequate:

(4) [atú+mi] ' (it is) fox'
 [yulā+ká+mi] ' (it is) the white (one)'
 [čú?lú+kí+waŋ] 'with the corn'
 [wa?la+nā+čúŋ] 'did it use to hook?'

These forms correspond to the careful-speech forms of (4a):

(4a) [atú?+mi]
 [yula?+ká?+mi]
 [čú?lú+ka?+waŋ]
 [wa?la+nā?+čúŋ]

Comparing (2) with (4) we see that the loss of the glottal stop in (4) leaves as a reflex the lengthening of the preceding vowel, and therefore if we do not want to miss the generalization involved, we would like to set up an intermediate stage for (2) whereby before the total loss of the glottal a vowel lengthening takes place, and only then the long vowel becomes shortened by means of another rule, independently needed in the phonology of Wanka. Thus, the modified version of rule (3) would be:

(5) /Vʔ/ → (v̄) / — $\left\{ \begin{array}{l} \#(\#) \\ + \end{array} \right\}$

This rule will then give us an intermediate stage for (2), which we offer as (6):

(6) [átū]
 [yúlā]
 [čú?lú+kā]
 [wa?lá+nā]

and to arrive at (2) we need another rule, which shall be referred as Vowel Shortening rule:

(7) v̄ → v / — ##

Note that this rule is obligatory once rule (5) has applied; otherwise (6) would constitute an incorrect output, or an ambiguous output at best.⁶

1.1.3. As can be seen in the last two forms of (2), that is [čuʔlú+ka] and [waʔlá+ña], glottal stops that appear within roots are left unchanged even in fast speech. We must ask then what is so special in a root that leaves the glottal stop preserved? The answer surely cannot be reached by way of phonetic conditioning. Note that the roots in question are inherited from Proto-Quechua, thus the possibility of being borrowings that came into the language after the completion of the vowel lengthening rule must be discarded. Note also that the data presented constitute evidence for a change in its very beginning, since in the following lect -- that is C -- rule (5) is no longer a variable one, and its application is completely obligatory; in other words, rule (5) has become categorical. Moreover, in lect C we find new cases of glottal elision, this time affecting the roots themselves, again in the form of a variable rule. This being so, we can be sure that the change stated in (5) is morphologically conditioned in its beginning. The most important thing is that this change appears as a variable rule, showing us an innovation in its embryonic stage, in this sense, the possibility of a prior phonetic motivation has no grounds at all. From these facts it seems clear that here we have a genuine morphologically conditioned change, since to state the rule we have to make use of morphological information.

1.2. The elision of /k/. In Wanka, the phoneme /k/ drops in the following suffixes: (a) -ykā 'durative', (b) -ka? 'determiner', (c) -Kta 'accusative', (d) -ñcik 'first person plural (inclusive)', and (e) -yki 'second person allocator'. Whereas the first two changes appear to be widespread and among different lects, the last three are limited to very restricted areas. In the following, I shall present the first two cases separately, and then the remaining three will be treated together, since they are found in rather small spots.

1.2.1. The durative -ykā. This modal is distributed among Wanka lects in two forms: -ykā and -yā. Historically, they go back to a pre-Quechua I *-ykā,⁷ and the vowel was shortened -- as it is today -- in a checked syllable. Since most suffixes in Quechua are of the pattern -C(V), it is evident that originally this suffix was bimorphemic, *-y being identifiable as the infinitive marker, and *-ka as the verb 'to be'. The way they become univerbated and lost their original meaning is not our concern here; we only

need to point out that in the synchronic grammar of Wanka, as well as in other Quechua lects, -ykā indicates a continuous action either in the past, present or future. In the remaining section I assume, without further comment that the underlying form of this morpheme in Wanka is -ykā.

1.2.1.1. Geographic Distribution. Among the different lects of Wanka, the innovated form covers the vast majority of territory. In fact, the -ykā area forms a more or less elongated island surrounded by the territory of -yā. The island forms, so to speak, a bridge between the three major Wanka lects. Thus, going from South to North, -ykā is preserved in the communolects of Sicaya (Waylla-Wanka), Orcotuna, Vixo, Huancaní, and probably Mito and Sincos (Waycha-Wanka)⁸; then the isogloss continues to the left side of the Mantaro River, beginning in the communolect of Huamali to the North, up to the Yanamarca Valley, and to the East covering the whole Masma Valley (Shawsha-Wanka). The remaining area is entirely "yaísta" (that is, showing -yā), except a small relic area on the mountains in the southwestern side of Huancayo, the communolect of Carhuacallanga, where -ykā is preserved, thus being a "kaísta" area. This is, roughly, the geographic distribution of the two variants of the durative.

1.2.1.2. Morphological Conditioning. From the data I shall present below it seems clear that the change that affects -ykā is not due to phonologically conditioned factors. Thus, the only way to formulate a rule that would account for the different realization of the durative among the two isolects we have delimited would be by writing a morphologically conditioned rule. To convince ourselves of this, let us consider the following roots, which are perfectly native words:

(8) [wáyka-]	'to assault'
[čáyku-]	'to catch'
[yáyku- ~ yáyka-]	'to enter'
[áyka]	'how much/many'
[tayká+či-]	'to make someone to sit'

We cannot say that /k/ drops only preceded by the semiconsonant /y/, because the sequence -yk- is regularly maintained in the roots of (8). Furthermore, the augmentative modal -yku ~ -yka (where the latter variant appears when followed by certain suffixes), which as we see has almost an identical phonetic shape as the durative, preserves its /k/ in a very

straightforward fashion.⁹ Thus, compare (9) with (10):

- (9) -yku ~ -yka 'augmentative'
 [lika+yká+ma+ŋ] 'he/she suddenly saw me'
 [liká+yku+l] 'by seeing'
 [hunta+yka+?+mú+n+ña] '(it) suddenly became filled up'
- (10) -yká ~ -yā 'durative'
 [lika+yká+ma+ŋ] ~ [lika+yā+ma+n] 'he/she is seeing me'
 [liká+yka+l] ~ [liká+ya+l] 'being watching'
 [hunta+yká+mú+n+ña] ~ [hunta+yā+mú+n+ña] '(it) is becoming filled up already'

If it is the case that /k/ does not always drop after /y/, then it is less probable that it can drop after another non-vocalic segment, as the following situation illustrates. Thus, /k/ is regularly maintained in the durative-simultative -čka, as well as in the dynamic -lku ~ -lka, as the examples of (11) and (12) show respectively:

- (11) [lula+čká+ŋki] 'you will be doing while...'
 [upy+ačká+ŋki] 'you will be drinking while...'
 [awsa+čká+ša?] 'I'll be playing while...'
- (12) [taká+lku+l] 'beating'
 [muyú+lku+l] 'turning'
 [taki+lku+pti+ŋ] 'once he/she sings'
 [apa+ka+lka+pú+la+y] 'please take (it) for him/her'

Thus, we have seen that it is impossible to determine an exact phonological environment where /k/ drops. This being so, the only way to write the rule involved would be by assigning to it morphological information, by using the feature [+Durative], as in (13):

- (13) /y/ → Ø / [_____
 +Durative]

It follows then that a rule along these terms is part of the phonological component of the yaísta lect; among the kaísta communolects, on the other hand, we assume that the rule is simply absent. This means that these latter communolects have the allomorph that is close to the underlying form.

1.2.1.3. Phonetic Realizations. Whereas we have not much to say about the phonetic realization of -yā among the yaísta lects -- it is uniquely pronounced either as [yā] or [ya], according to the environment

we have mentioned in 1.2.1.¹⁰, the way -ykā is actualized in the kaísta lects however is interesting to note. We shall have a look at these phonetic variations.

Aside from the very general rule of yod elision, by which /y/ in syllable-final position and preceded by the vowel i is assimilated to it causing the lengthening of the vowel (thus, líkan from /li+ykā+n/ 'he/she is going'), the most notorious change affecting -ykā is the palatalization of /k/. This is true for almost all of the kaísta area, excepting the Masma Valley and some sporadic points within the Yanamarca Valley. In these latter it is possible that the rule of palatalization involved is a variable one, its application being determined by the style of speech used (casual speech favouring the innovated form). At this point we may ask: Is the process of palatalization affecting /k/ a general process or a particular one that operates only on the durative morpheme?

To answer the above question, let us first consider the case of the comunolect of Sicaya. In this locality, we observe the following realizations of the durative: (a) -ykā, (b) -yk^yā, (c) -yt^yā, and (d) -yčā. Although the exact distribution of these variants among the speakers (taking into consideration age and style variables only) is far from clear, we can safely say that they show a successive degree of palatalization. To be more precise, the process involved is of the progressive type and it does not operate when /k/ is in final syllable (thus [lit^yúptik] from /li+ku+pti+k/ 'if you go', [mit^yúncik] from /miku+nčik/ 'we (incl.) eat', [tíkti] 'wart', etc.). Thus in Sicaya this process not only affects -ykā; it is rather a general rule that applies across the board, whenever its structural description is met: after /i, y/; for some speakers even when /n/ is mediating. An illustration of the latter case would be [wasi+ŋ+k^yúna] ~ [wasi+n+t^yúna] ~ [wasi+n+čúna] 'his/her houses'.

Now let us consider other cases. As I have stated earlier, the Yanamarca Valley also shows palatalization of -ykā. However, here I have found only what appears to be the first degree of palatalization, namely -yk^yā; furthermore, this process only affects this and only this suffix. The same thing seems to happen in the comunolect of Orcotuna (Waycha-Wanka). The present and other similar facts¹¹ suggest that within

the *kaísta* territory, if the change continues, it will finally end up in a true palatal, namely *-yčā*, as in Sicaya and other areas of Quechua I. Thus, again, note that in Yanamarca and Orcotuna the palatalization of /k/ seems to be morphologically conditioned, since it affects the durative *-ykā* only. In view of this situation, it wouldn't be too daring to say that in Sicaya the palatalization process began by idiosyncratically affecting the durative morpheme and that it was only secondarily generalized to other environments.

Another change that must be noted is that in one place, Acolla (located in the Yanamarca Valley), I have found the variant *-y^vā* side by side with *-ykā*, the former being used in careless speech. This, I think, is a nice illustration of the way /k/ may have disappeared among the *yaísta* communlects. Furthermore, Torero (1964:470A) also found the same intermediate stage in some localities of Cajatambo (Lima) and Yanacocha (Pasco). Thus I postulate that the intermediate step of the change /k/ → ∅ was the yodization of the velar phoneme.

Finally, to end this section we shall note that, as has been suggested in the preceding lines, the drop of /k/ is observed not only in Wanka but also among other varieties. Of special interest is the fact that the variety of Tarma and also that of Yauli, on the northern border of Wanka, form an entirely *yaísta* area (cf. note 8). Thus it appears that the *kaísta* zone of Wanka can be considered a relic area with respect to the preservation of /k/ in the durative. Note furthermore that wherever the velar drops we are in face of the same constraint: it occurs only in the durative, and sometimes in the augmentative also.

1.2.2. The determiner *-ka?* Among the Quechua lects, Wanka is the only one that has a determiner suffix. Its origin is clear, since it was a by-product of the univerbation of **ka-* 'to be', nominalized by the agentive *-?* (which goes, as any glottal stop in Ya?a-Wanka, back to an original **-/q/*), in periphrastic constructions like: **waĩpa ka+q+ta+m ašiyka+n* 'he/she is looking for the (thing) that is chicken'. Synchronically it functions as a determiner, thus *waĩpa* means simply 'chicken', whereas *waĩpa+ka?* means 'the chicken' (already known by the listener). Although its function as a determiner is beyond doubt, its syntax is far from clear. Here I shall postulate *-ka?* as the underlying form of the determiner among

the Yaʔa-Wanka lects; for N̄uha-Wanka, on the other hand, -kax must be assumed as the basic form (since here $\frac{ʔ}{q} > /x/$). This section will be entirely devoted to the phonetic realization of the determiner among the Yaʔa-Wanka communolects, since the latter form, that is -kax, shows no elision whatsoever of its /k/.

1.2.2.1. Geographic Distribution. As in the case of -ykā, here also we have a rather conservative area where /k/ never drops. This is a tiny area that covers approximately the localities of Sicaya (Waylla-Wanka), Orcotuna, Vixo, Mito, Sincos and Huancaní (Waycha-Wanka), this latter on the borderline with N̄uha-Wanka. The only change that affects -kaʔ is the loss of /ʔ/, as it should be recalled from our discussion in 1.1. Thus, the loss of the glottal phoneme in syllable-final position leads to compensatory vowel length (and, furthermore, the long vowel is shortened before pause). This can be seen in the following examples:

- (14) [aʃnu+kā+ta] 'to the donkey'
 [yawar+kā+wan] 'with the blood'
 [walás+ka] 'the boy'

which come from underlying forms such as those of (14a):

- (14a) /aʃnu+kaʔ+ta/
 /yawar+kaʔ+wan/
 /walaš+kaʔ/

and, as we already know, in Sicaya we may also expect forms such as [walmi+k^{yā}+ta] ~ [walmi+t^{yā}+ta] ~ [walmi+čā+ta] 'to the woman', since palatalization applies across the board. The underlying form of this expression is of course /walmi+kaʔ+ta/.

As in the case of -ykā, there is also another relic area, and this is again the communolect of Carhuacallanga. Here -kaʔ is preserved even more intact, because /ʔ/ is also maintained and palatalization is absent. Thus the form observed in this area is close to the underlying representation we posited for the determiner.

Comparing the treatment of -ykā and -kaʔ among the conservative communolects we note that if a lect preserves -ykā then it is likely for the same lect to preserve also -kaʔ; the reverse situation is not true, because -kax is regularly maintained in N̄uha-Wanka, and yet we know that in this area there exists geographic alternation between -ykā and -yā.¹²

1.2.2.2. Realization of -ka?. With the exception of the two relic areas mentioned above, in the remaining territory of Ya?a-Wanka the velar phoneme of the determiner drops, although this time depending on the environment. I offer below its various phonetic realizations.

- (15) [wamlá+mi] 'the girl (is)'
 [wasí+maŋ] 'toward the house'
 [yakú+waŋ] 'with the water'
 [wamlá+ka] 'the girl'
 [walás+ka] 'the boy'
 [walaš+ká+mi] 'the boy (is)'

If we were confined to use this and similar data it surely wouldn't be too hard to arrive at a basic form -ka? (especially after having introduced the glottal elision rule). There is, however, an easier way of getting at the latent form, and this is of course by looking at the conservative lects. Thus the problematic first three items of (15) are nicely solved by looking, for example, at data from Orcotuna:

- (15a) [wamla+ká+mi]
 [wasi+ká+maŋ]
 [yaku+ká+waŋ]

and if we compare (15-15a) with the respective forms attested in Carhuacallanga, we would be able to recover the glottal stop, otherwise realized as vowel lengthening or as Ø.

From (15) we note that: (a) /k/ drops when the stem to which the determiner is added ends in a vowel, and (b) this is true only when -ka? is not a closing morpheme. Otherwise /k/ is preserved. This is a categorical rule, and a variable one only in communolects that remain in the neighbourhood of localities which preserve -ka?. This is clearly a transitional situation. Thus, in Aco and San Jerónimo (Waycha-Wanka) I have found forms such as [wamla+ká+ta ayá+mu+y] 'go call the girl', [wamla+ká+waŋ lí+y] 'go with the girl', together with [wamlá+ta ayá+mu+y] and [wamlá+waŋ lí+y], respectively.

Turning now to (15), we must say that in order to derive it we have to postulate an intermediate stage like (15b):

- (15b) [wamla+á+mi]
 [wasi+á+maŋ]
 [yaku+á+waŋ]

[wamlá+kā]

[walaš+kā]

(assuming that the vowel lengthening rule has operated already). Thus, from these forms we arrive at (15) in the following way. To the first three items of (15b) we must apply a vowel contraction rule (needed independently in the phonology of Ya'a-Wanka) whereby the vowel of the determiner is eliminated in favor of the stem vowel; to the remaining two items, on the other hand, we apply rule (7), that is, the vowel shortening process. Furthermore, it should be noted that the vowel contraction took place first among homogeneous vowels, and only then among heterogeneous ones. I have found commuonlects where only the first step was accomplished. Thus, to give an example, in the locality of Ingenio (Waycha-Wanka) I observed forms such as [walmi+á+ta ayá+mu+y] 'go call the woman', [čuku+á+ta apá+mu+y] 'bring the hat', etc. The same is true in Chahuas (locality of Sincos, Waycha-Wanka). Incidentally, note that the vowel contraction rule is conspirative in nature, since in Quechua in general sequences of vowels are prohibited.

1.2.2.2.2. What seems to be a second step in the drop of /k/ is illustrated in the following set of items:

- (16) [walaš+á+mi] 'the boy (is)'
 [ulpay+á+waj] 'with the dove'
 [walaš+ka] 'the boy'
 [ulpáy+ka] 'the dove'

As we see, /k/ drops even when the stem to which the determinant is added ends in a consonant. Clearly we are in face of a rule generalization. This second stage, however, is governed by a variable rule, its application being determined depending on the style of speech used. As usually, casual speech tends to favor elision of /k/; in careful style however the full form is automatically recovered.

1.2.2.2.3. Still a further step in the elision of /k/ is shown in the following data:

- (17) [wámlā ša+la+mú+nā] 'the girl had come'
 [walás+ā ša+la+mu+nā] 'the boy had come'

(which come from underlying /wamla+ka? ša+la+mu+nā?/ and /walaš+ka? ša+la+mu+nā?/, respectively where we see that /k/ drops also when -ka? is a closure morpheme. Again, this is a further step in the propagation

of the change. The generalization here involved is also a variable rule, and furthermore it coexists with the situation described in the preceding paragraph. This is to say that the third stage in the rule propagation does not presuppose the completion of the second stage. In other words, whereas the second step presupposes the completion of the first one, the third stage does not imply that the second is already accomplished. In short, we can say that $2 = 1$, but not that $3 = 2$.

To conclude this section, a word must be said with respect to the sonorization of /k/ whenever it is preserved. Thus, there exists in Wanka a voicing rule (see 1.4. below) whereby /k/ becomes voiced, its status being that of a variable rule, depending again on the style of speech used. Voicing, however, is not restricted to the velar stop of -ka?, as in certain communolects palatalization is limited to -ykā; rather, it applies across the board among the suffixes. This being so, it is natural to expect that where voicing exists the allomorph -kā is actualized as -gā.

1.2.2.3. Morphological Conditioning. As in the case of -ykā, /k/ never drops in roots and in suffixes other than the determiner. Thus, by looking at the data given in 1.2.1.2. plus the items provided in (18), which are all forms inherited from Proto-Quechua:

- (18) [páka-] 'to hide'
 [púka-] 'to blow'
 [áika-] 'to wait'
 [wáska] 'rope'

and also in (19):

- (19) [lumi+kúna] 'stones' (-kuna 'plural')
 [plása+káma] 'up to (the) plaza' (-kama 'allative')
 [hatu₁+káska] 'greater than' (-kaska 'comparative')

we see that /k/ is intact, except that it becomes voiced where the rule of voicing is present. Incidentally, I must note that voicing only would affect the items of (19), not those of (18). Still, to give a more compelling example of how /k/ elision only affects -ka?, consider the following forms:

- (20) [hampi+kú?+mi] 'the healer (is)'
 [alká?+naw] 'as it were waiting'
 [muká?+naw] 'as it were smoking'

(from Huacrapuquio) where the velar stop is maintained regularly. Thus, any attempt in trying to determine a phonetic environment in which /k/ drops would immediately fail. Here, as in the case of the durative, we have to recognize that the only way to write the rule is by providing its structural description with a grammatical information. However, here ends the parallelism we have been establishing between -ykā and -ka?, for in the former case we have no evidence whatsoever as to where and under what conditions the velar phoneme dropped; in the latter, on the other hand, we have good illustrations of the fact that /k/ began to drop intervocalically, provided the determiner was not a closure morpheme. Thus the data so far presented show us that /k/ began to be affected after a vowel ending stem, and then we can also note its gradual propagation to other positions. But even if we know that the original environment was postvocalic, we cannot avoid the conclusion that the change ultimately affected idiosyncratically the determiner suffix only. For these reasons we must conclude that also here we are dealing with a genuine morphologically conditioned phonological change.¹³

1.2.3. Elision of /k/ in other suffixes. Aside from the drop of /k/ in the durative and the determiner, it also drops in the accusative -Kta, in the first person plural (inclusive) marker -ñcik, and in the second person allocator -yki. Below I shall consider briefly each of these cases.

1.2.3.1. The accusative -Kta. The accusative marker is realized in Ya?a-Wanka as -kta when the stem to which it is attached ends in a short vowel, and as -ta otherwise (including after long vowels). This synchronic rule is however an historical one among all the rest of the varieties of Quechua, including the Ñuha-Wanka lect. Thus, the Ya?a-Wanka variety is the only Quechua lect that preserves -kta in its underlying form. However, among the northeastern communolects of Waylla-Wanka the allomorph -kta has been leveled to -ta, its alternation with -kta thereby disappearing. These communolects are Santo Domingo de Acobamba, Andamarca, Comas, and Cochabamba, all of them in the neighbourhood of Ñuha-Wanka, which only has -ta. Thus the easiest explanation for the elimination of -kta would be to say that it is due to influence from that lect; furthermore, this hypothesis is reinforced by the fact that in another communolect, Chalhuas

(Waycha-Wanka), located on the western border with Ñuha-Wanka, I have found only -ta. However, even without recourse to extrasystematic explanations, we can safely say that the change -kta → -ta is due to the universal principle of minimization of allomorphic alternation. But even if we say that the loss of /k/ in the accusative variant -kta is due to restructuring, we have to admit that originally this change was also morphologically conditioned in all of the Quechua lects, since, as far as I know, there never was a rule that otherwise affected the sequence -kt-. Synchronically, the fact that this sequence remains unaffected is illustrated in the following set of native roots:

- (21) [lákta] 'thick'
 [túktu-] 'to be asquat'
 [tíkti] 'wart', etc.

1.2.3.2. The plural marker -ñik. In the same localities where we have leveling of -kta → -ta, I found that the velar phoneme of the first person plural (inclusive) marker also drops. The rule is a categorical one, except in one communiolect -- Comas (Waylla-Wanka) -- where it is found only in careless speech. Furthermore, the same change was also noticed in Roncha (locality of San José de Quero, Waylla-Wanka), on the western side of Waylla-Wanka. Again, it cannot be said that /k/ regularly drops in final position, since forms such as:

- (22) [čúsik] 'a variety of owl'
 [li+kúpti+k] 'if you go'

-- not to speak of final /k/ preceded by a vowel other than i -- show that the velar phoneme is maintained intact. It can be argued perhaps that in the latter form /k/ is a morpheme that marks second person, that being the reason why the velar does not drop, but what about the first item? Here /k/ does not mean anything, nevertheless it is preserved. Once more, we are here confronted with a morphologically conditioned change.¹⁴

1.2.2.3. The second person allocator -yki. Among the northernmost communiolects of Shawsha-Wanka (in Ricrán, for example) I have noticed a change that consists in the syncope of the syllable ki of -yki, perhaps through an intermediate step -yki → -yi → -y. Thus, accordingly, we have: [čaklá+y+ta] from /čakla-yki+ta/ 'your (acc.) farm', [mísá+y+man] from /mísayki+man/ 'on your table', etc. The conditions under which this

change operates need to be investigated further, but what is beyond doubt is that the change affects that suffix only, similar sequences being conspicuously maintained. Furthermore, this change seems to be more general (categorical) in the neighbouring lect of Tarma. Thus, here we have forms such as: [qam+qatta yali+ša+y+m̩], [pāga+ša+y ali+ta+m] from /qam+qatta yali+ša+yki+m/ 'I'm going to win you', /pāga+ša+yki ali+ta+m/ 'I'm going to pay you a lot', respectively.

1.3. Velar Voicing. Except for borrowings from Spanish, Quechua in general does not have voiced stops, although some lects -- especially those of Quechua II -- have developed them as a result of phonological changes not only as voiced allophones, but also as underlyingly distinctively voiced phonemes.¹⁵ In the Wanka lects I have found a variable rule affecting the velar /k/, but, as we shall see, the rule operates in derived forms only, whereas the roots remain unchanged.

1.3.1. Geographic distribution. The voicing rule is observed in the Ya?a-Wanka lects, thus covering part of the provinces of Huancayo and Concepción. From South to North, the change begins in the communolects of Cocharcas (district of Sapallanga) and Huamamarca (district of Huayucachi); it continues covering the left side of the Mantaro River up to the district of Cajas Chico (Huancayo). From here the isogloss, on the one hand crosses the river, reaches the communolect of Huamancaca Chico, and extends through the districts of Chupaca, Pilcomayo and Ahuac, excluding the districts of Sicaya, Orcotuna (including Vixo), Mito, Sincos and Huancaní, up to the border with Shawsha-Wanka; on the other hand, it continues covering the remaining districts of Huancayo and Concepción up to the border with Shawsha-Wanka. In this way the voicing area forms two islands of unvoicing territories, one at the southwestern side of the Valley, and the other at the banks of the river, in the northern territory of Ya?a-Wanka, both islands on the right side of the river.

1.3.2. Morphological Conditioning. To see how this rule operates, let us consider the following data:

- | | |
|------------------------------|--------------------------------|
| (23) [waḷpā+ga wañú+gu+ŋ] | 'the chicken died' |
| [aŋka+guná+ga pālí+gu+ŋ] | 'the buzzards flew' |
| [čupaka+gáma li+ku+yá+lga+ŋ] | 'they are going up to Chupaca' |
| [taki+lgú+lmi mika+págu+ŋ] | 'they use to eat singing' |

which in careful speech is realized as (23a):

- (23a) [wałpá+ka wañú+ku+ŋ]
 [aŋka+kuná+ka pālí+ku+ŋ]
 [čupaka+káma li+kutyá+lka+ŋ]
 [taki+lku+lmi mika+páku+ŋ]

As we can see, in (23) only the suffixes are affected by the rule; the roots, on the other hand, are left unchanged.¹⁶ Notice that here, as in the other cases, the roots are patrimonially inherited from Proto-Quechua. Thus, again, there is no way of formulating this rule unless we make use of categorial information; this can be done as follows:

- (24) /k/ → (g) / []
 + suffix

where the parenthesis notation indicates that this rule is conditioned by the style of speech used. As usual, fast speech tends to favor the change. Incidentally, we should note that this change is almost categorical in certain communolects and for certain speakers (this was noted especially in Huarivilca and in Cochabamba and Huancayo). This is so, because in these areas the speakers were aware that they pronounce g where others have k, thus laughing at those who use the latter sound; this is not true for the speakers who manifestly make variable use of the rule, since they accept both pronunciations while still considering the "older way" better. From the data we have at hand it is difficult to infer what was the primary conditioning factor for voicing (even in that restricted environment); it may be the case that the rule started intervocalically and then spread to after voiced consonants, and so on; a careful study may perhaps detect this possibility. Whatever the inception might have been, there is no doubt that the change affects suffixes only; as such, this is another example showing that there are morphologically conditioned changes.

1.4. Depalatalization of /ñ/. According to Parker (1971:66-70), the depalatalization of /ñ/ is a general change that covers almost the entire territory of Quechua I, except the lect of Baños Rotos and the peripheral lects of Corongo (to the North) and Wanka (to the South). In this latter lect however I have found the same rule, but this time affecting only the two suffixes which contain that phoneme: -ñá? 'narrative past', and -ñā 'inceptive'.

1.4.1. Geographic Distribution. The area where the two mentioned suffixes appear depalatalized covers the territory of Waycha-Wanka, and also the northeastern side of Waylla-Wanka, up to the border with Shawsha-Wanka. Aside from these areas, I have also found depalatalization of /ñ/ -- this time not only restricted to the suffixes -- among the northernmost villages of the district of Ricrán (Shawsha-Wanka). This latter situation can perhaps be attributed to influence from the neighbouring lect of Tarma which shows the rule in its generalized version; for this reason I will ignore this latter area, and deal with the former areas only. I assume that here the underlying forms of the suffixes are -ña? and -ña, in view of the interlectal alternation.

1.4.2. Grammatical Conditioning. That the rule of depalatalization affects only the suffixes and not the roots can be seen in the following examples:

- | | |
|--------------------------|---------------------------------|
| (25) [kaña+yá+na] | 'he/she was burning (it)' |
| [maña+mú+na] | 'he/she had asked for (it)' |
| [wayta+yā+ná+na] | 'it was flourishing already' |
| [chuñu+naku+ya+lká+ñ+na] | 'they are congregating already' |

Contrast this situation to that of Huacrapuquio, for example, where we have the fully preserved forms:

- | |
|--------------------------|
| (25a) [kaña+yā+ña?] |
| [maña+mú+ña?] |
| [wayta+yā+ná+ña] |
| [chuñu+naku+ya+lká+ñ+ña] |

Thus, it is clear that in (25) we have another example of a nonphonetically conditioned sound change, since there seems to be nothing special among the roots that can prevent a rule from taking place. Therefore, in order to formulate the rule involved we are forced, again, to make use of grammatical information. Thus we can formulate the rule of depalatalization as follows:

- (26) /ñ/ → n / [_____]
 + suffix

It should be noted that whereas this rule is categorical for the narrative past, it is not so for the inceptive, since I have found communolects where -ña alternates with -na (for example in Ingenio and Andamarca). The implication of this is that perhaps the depalatalization of -ña? is

earlier than that of -ña. This is further confirmed by the fact that among the localities of Masma and Molinos (Shawsha-Wanka) the realization of the narrative past is -nax, whereas the inceptive remains as -ña.

Furthermore, an interesting situation that shows the different treatment of /ñ/ within suffixes and within roots is the following. In San Jerónimo I have noticed expressions such as: [nã+mi li+kuyã+na] from /ñã+mi li+kuykã+ñã/ 'he/she was leaving already', where ñã as an adverb (historically related to the suffix) maintains the palatal nasal, whereas the suffix shows the change. In the second section of this paper I will have occasion of returning to this point; for the moment it may suffice to say that again we are confronted with a grammatically conditioned sound change.

1.5. The Monophthongization of /aw/. In Wanka, as in other Quechua I lects, there are two suffixes which contain this sequence: the locative -caw, and the comparative -naw. These forms are monophthongized as -cû and -nû, respectively. (Among the Ñuha-Wanka communolects the second suffix does not exist; here -nas is the equivalent (related?) morpheme). The monophthongization of /aw/ is also found in the Ancash variety of Quechua I, where it not only affects the suffixes mentioned, but the entire lexicon. Parker (1971:78-82) gives the exact distribution of this change which he considers functionally related to the monophthongization of /ay/ → ê, and /uy/, /iy/ → î. In this area /aw/ is monophthongized as ô.

1.5.1. Geographic Distribution. In general, the diphthongal form of the suffixes is found in all three Wanka lects. Thus in Waylla-Wanka we find it in the most conservative areas, namely Huacrapuquio and Carhuacallanga, both located at the extreme southern border of the province of Huancayo. We also find another Waylla communolect, bordering the Waycha variety, and this is Sicaya, where however only sporadically I hear the locative as -caw, although -naw is the only realization of the comparative. Fluctuating areas contiguous to Huacrapuquio and Sicaya have been located, and these are Viques and Vixo, respectively. Here I found variably -cô and -nô in nonfinal position, and -cô and -no word finally (recall the vowel shortening rule stated in 1.1.2.). In Waycha-Wanka I have found -caw and -naw only among the communolects of the right side of the river, beginning in Orcotuna and ending in Huancani, at the border with

Ñuha-Wanka. In this latter lect -- since -naw does not exist -- we find -ĉaw again only among the communolects of the left side of the Mantaro River, up to the district of Paccha. Elsewhere, we find -ĉū ~ -ĉu and -nū ~ -nu, that is the monophthongized forms. Here I shall assume that the underlying forms of the suffixes are -ĉaw and -naw, respectively.

1.5.2. Morphological Conditioning. To see how this change operates, affecting the suffixes only, let us consider the following examples:

- (27) [ĉawpí+ĉu] 'in the middle'
 [ñawpa+ĉū+mi] 'in advance, before'
 [kawpú+nu] 'like a spin'
 [pinaw+nū+mi] 'like a (variety of) herb'

As we can see, only the suffixes are affected. Thus clearly we have again a case of morphologically conditioned phonological change.¹⁷ The only way to formulate the rule involved is by restricting its application to the locative and comparative morphemes. Thus, we would have something like (28):

- (28) /aw/ → ū / [_____]
 + suffix

1.5.3. Phonetic Realizations. As I have said in 1.5.1., there are transitional areas where we find -ĉō ~ -ĉo and -nō ~ -no. Thus obviously an intermediate step in the change is an assimilation of the vowel a to the following semiconsonant, that is -ĉɔw and -nɔw. A second stage is the monophthongization in ō. Now, since among the Wanka lects we do not have mid vowels (not even allophonically as it is the case in other varieties of Quechua that retain /q/, a lowering phoneme par excellence), the obvious solution -- as in the treatment of borrowings from Spanish¹⁸ -- is to rise this derived orphan vowel, and thus we have the forms -ĉū ~ -ĉu and -nū ~ -nu. However, in certain communolects of Waylla-Wanka (such as Huayucachi, Chongos Bajo, Chacapampa, etc.) I found the variants -ĉuy and -nuy. How do we explain these latter forms? I believe that here the yod is an exrescent phoneme, for similar cases are not difficult to find elsewhere among the Wanka lects. Thus, we have variants such as ĉuyĭu alternating with ĉūĭu from /ĉuĭu/ 'corn', buyĭu side by side with būĭu from Spanish hollo 'a special type of sweet bread', etc. These variants with yod are less generalized, and in one and the same communolect we can

find both, the forms with yod and the monophthongized versions. Finally, as has been said elsewhere in this paper, the allomorphs with short vowel are the product of the application of the vowel shortening rule; thus we have here another independent motivation for this rule. In the second section, I shall return to this change briefly.

1.6. Nasal Absorption. In all Quechua varieties there is a suffix called directional, realized as -mu; this morpheme indicates the beginning of an action in a place other than where it is spoken of, and with verbs of motion it also indicates the direction towards the place of speaking. This suffix changes to -w among certain communolects of Waylla-Wanka by a variable rule, as we shall see.

1.6.1. Geographic Distribution. The change -mu → -w is found among the communolects of Sicaya and neighbouring communities, especially San Juan de Jarpa, in the Waylla lect. Aside from these areas, we find constantly -mu in the remaining territories of the Wanka lect. As far as I know, this change is unique, to be found only in Waylla-Wanka.¹⁹

1.6.2. Grammatical Conditioning. To see how this change operates affecting the directional -mu only, let us consider the following cases which correspond to the colloquial style, as observed in Sicaya:

(29) [ŝa+w+lá+nčik]	'we (incl.) came'
[apa+ká+w+lā]	'I brought (it) here for me'
[aší+w+ŝa]	'I'll look for (it) there'
[hulā+la+w]	'he/she removed (it) from there'
[yalā+li+w]	'they got off from there'
[apa+ka+w+kí+maŋ]	'you should have brought (it) from there'
[talpu+ka+lā+w+čik]	'we (incl.) have planted (it) over there'

forms which in a more careful speech correspond to those listed in (29a):

(29a) [ŝa+mu+lā+nčik]
[apa+ka+mú+lā]
[aší+mú+ŝa]
[hulā+lā+mu+ŋ]
[yalā+lí+mu+ŋ]
[apa+ka+mu+ŋkí+maŋ]
[talpu+ka+la+mú+nčik]

As we can see, the nasal /m/ is dropped in front of the vowel /u/ which in turn is semivocalized (or desyllabified), this latter as a result of the general principle whereby in Quechua sequences of vowels are rejected. The first three examples in (29) show the change $-\underline{mu} \rightarrow -\underline{w}$; but, as it should have been noted, in the last four items we see not only that the nasal /m/ is dropped, but also the same is true for the nasal /n/ of the next suffix. Thus we have here a change $-\underline{mu+n} \rightarrow -\underline{w}$; whereby both nasals are lost. That it is only the following nasal and not any other consonant can be seen from the following examples:

- (30) [$\hat{c}a+la+m\acute{u}+pti+\eta$] 'if he/she arrives'
 [yayká+mu+y] 'come in!'
 [$\hat{c}a+l\acute{k}\acute{a}+mu+l$] 'after arriving'

where the variant $-\underline{w}$ does not appear at all, not even in the most unreflecting speech. This is perhaps because the result of the change would be an intolerable cluster, completely prohibited in Quechua. In this sense the nasal /n/ has proved to be the weakest of the resonants, since segments such as \underline{v} and \underline{l} are resistant to the change. It should be noted, incidentally, that I have found no traces of a previous vowel nasalization. Thus we do not have intermediate stages such as $-\underline{m\ddot{u}}$ or $-\underline{w\ddot{}}$; rather, it seems that the loss phenomenon is abrupt, since this change is governed by a variable rule.²⁰

We must note that not only does $-\underline{mu}$ not change in checked syllables (where the final consonant is not a nasal), it also does not operate whenever the loss would destroy semantic information. Thus from $\hat{c}a+la+m\ddot{u}$, which comes from an underlying form $/\hat{c}a+l\acute{a}+mu+\ddot{v}/$ 'I arrived', a possible output such as $*\hat{c}a+la+w$ would be ambiguous since it would mean also 'he/she arrived', from $/\hat{c}a+l\acute{a}+mu+n/$. Here we have a clear case of prevention of homonymy, although there are abundant cases in Wanka which show that the danger of homonymy is not a sufficient reason for blocking application of a rule. It may well be the case also that a long vowel, which in Wanka sometimes behaves as a \underline{VC} sequence, is preventing the change. Whatever the reason, the only way to formulate the rule involved is as follows:

- (31) $/mu(n)/ \rightarrow (w) / \left[\begin{array}{c} \text{---} \\ + \text{ Directional} \end{array} \right] \left[\begin{array}{c} \text{---} \\ | \end{array} \right]$

(where " | ---" means open syllable). This is, as I have stated earlier, a

variable rule; and especially in Sicaya it is turning into a categorical one. That the rule is grammatically conditioned is corroborated by the following items:

- (32) [amú+la] 'he/she used to have (it) in his/her mouth'
 [hamu+yā+mā+nā] 'he/she was blaming me'
 [kumú+nyā+ŋ] 'he/she starts to bow down'
 [amu+čá+yā] 'I'm fertilizing (it)'
 [ĩamu+m] '(it is) obtuse'

where the sequence mu(n) is never affected, not even in the most careless speech. Thus, the obvious conclusion is that here we have another case of genuine grammatically conditioned rule.

1.7. Glottal Metathesis. As we have seen in 1.1., the glottal stop is one of the reflexes of */q/ in Yaʔa-Wanka. Thus the reflexes of the Proto-Quechua suffixes *-rqU 'simulative' and *-šqa 'participle' are, respectively, -ʔlU and -ʔša, showing a clear case of leftward metathesis. However, as we shall see, the reflex of the simple past suffix *-rqa is not *-ʔla but -lʔa, that is without metathesis. Incidentally, these suffixes are historically bimorphemic, where *-r and *-š were aspect markers. Furthermore, the vowel of the simulative is realized normally as u, but as a if followed by certain suffixes (thus behaving in the same way as the augmentative -ykU (cf. 1.2.2.2)).

1.7.1. Geographic Distribution. The metathesized suffixes and their derived forms are found only in Yaʔa-Wanka. In Nuha-Wanka, on the other hand, the reflexes of the mentioned suffixes are, respectively, -lU and -ša, showing no reflex whatsoever of the */q/, in spite of the fact that in this lect, as I stated earlier, the uvular stop regularly went to /x/. The explanation for this is that here the suffixes (including the simple past) were subject to a cluster simplification rule which is found elsewhere among the Quechua lects, either as an accomplished process or as a variable rule (see 2.4. below). To complicate matters, however, I have noticed also in Yaʔa-Wanka reflexes of the simplified form of the simulative; but since I do not have a detailed morphological information of this variety, it is difficult to get a clear understanding of the situation.

1.7.2. Grammatical Conditioning. As stated earlier, glottal metathesis affected the simulative and the participle suffixes only; the simple past,

as well as similar sequences within the roots, are left untouched. Thus, compare (33) with (34):

- (33) [mikú+?lu+ŋ] 'he/she ate (it)'
 [puñu+?lú+l?a] 'he/she slept (there) for a while'
 [likali+?lā+li+mú+ŋki] 'you (all) appeared suddenly'
- (34) [puñú+l?ā] 'I slept'
 [awsa+l?ā+nki] 'you played'
 [mikú+l?a] 'he/she ate'

where we see that only the simulative was metathesized. Note particularly the second item of (33), where we find the simple past following the simulative. Thus, we may question, why is that metathesis applied only to the simulative and not to the simple past? The same question holds for the forms listed in (35):

- (35) [húl?u-] 'to remove'
 [úl?u] 'hill'
 [áíl?u] 'dog'
 [pil?a] 'wall'
 [síŋ?a] 'nose'

where we see that the sequence C?, particularly l?, does not metathesize. Now, let us consider the items of (36):

- (36) [mančá+?ša] (ka+ŋka+n) 'he/she is scared'
 [wañú+?ša] (ka+ŋka+n) 'he/she is dead'
 [pakí+?ša] (ka+ŋka+n) 'it is broken'

and compare them to the items of (37):

- (37) [píš?u] 'bird'
 [púč?u] 'bitter'
 [áč?a] 'rough'
 [áy?i] 'to escape'

As can be seen, once more metathesis applies only to a particular category, and similar sequences occurring within roots are left unchanged. Thus, a formulation of the rule for both cases would have this form:

- (38) /C? / > /?C / / $\left[\begin{array}{l} \langle + \text{Simulative} \rangle \\ \langle + \text{Participial} \rangle \end{array} \right]$

To be true, however, I must say that in Waylla-Wanka I found the doublet mīlay from /mi?lāy/ 'lap' (noted in Sicaya), and mīlay from

/mĩʔay/ elsewhere (cf. Huacrapuquio mĩʔay); this form goes back to Proto-Quechua *mĩlqay. As we can see, the first alternant is a metathesized version. This is the only example I have found where metathesis applied to a root. Furthermore, the normal development from *riqsi- 'to know, reckon' would have been in Yaʔa-Wanka *lĩsi- (or *liʔsi- among the communolects which preserve the glottal stop, as one finds lixsi- in most Ñuha-Wanka varieties); however, what we find elsewhere in Yaʔa-Wanka is lisi- from /lisʔi-/ (cf. Huacrapuquio lisʔi-, and also lixsi- in the communolect of Paccha, Jauja). These two cases then seem to reduce the validity of this example as another case of grammatically conditioned sound change; however, in view of the overall evidence presented in this paper for morphologically conditioned primary changes being limited to suffixes, it is at least remarkable that the glottal metathesis is most widespread and systematic in certain suffixes.

2.0. A language particular universal. In the first section of this paper I have presented several cases of morphologically conditioned phonological changes. We have seen also that some of these are attributable not only to Wanka, but parallel changes taking place among different lects of both Quechua I and II can be detected. However, some of them are observed in Wanka only; this can be explained partially by the fact that the change takes place within a specific suffix that is lacking among other lects (e.g. the determiner -kaʔ), or else by the fact that the change affects a sound which is limited to this lect (e.g. the glottal stop). In any case, however, I have tried to demonstrate that it simply is impossible to detect a purely phonetic conditioning for these changes, the natural conclusion thus being that they are grammatically conditioned changes; that is, in order to formulate the rules involved in each case one has to state the domain of its application by providing a morphological information to its structural description. Moreover, it was shown that most of these rules are not morphologized versions of prior phonologically determined rules.

Now, in view of the facts we have observed I would like to formulate a working hypothesis according to which there is tendency in Quechua for a change to begin affecting suffixes only, and then to spread to roots. This fact is familiar to Quechuanists, who either implicitly or explicitly have

assumed morphologically conditioned changes.²¹ Whatever the reason for that tendency may be remains a mystery; thus in this final section I will limit myself to illustrating this type of rule generalization by presenting vivid examples of sound change in progress. If I succeed in demonstrating not only the type of change we are dealing with but also its propagation from the suffixes to the entire lexicon, then Quechua would be a clear counterexample to Kiparsky's (1973) claim that no primary sound change can depend on morpheme boundaries. What is more important, the cases presented here would challenge Kiparsky's hypothesis according to which all phonological rules that depend on morpheme boundaries arise by generalization from non-derived to derived environments. The examples I will provide show that a rule can become generalized from derived to nonderived environments, thus falsifying Kiparsky's claim.

2.1. The generalization of glottal absorption. Below I offer a lectal matrix that shows the generalization of the rule of glottal absorption among the Yaʔa-Wanka lects, as presented in Cerrón-Palomino (1973:79). The interpretation of the matrix is as follows. The lects A-G and the rules (1) - (6) form an implicational pattern²² in the following way: $G \Rightarrow F \Rightarrow E \Rightarrow D \Rightarrow C \Rightarrow B \Rightarrow A$; that is, lect G has accomplished the processes that took place in F; this, in turn, has the changes observed in lect E, and so on, but not conversely; that is, lect F for example does not have yet rule (5), and lect E in turn does not have rule (4), whereas this change is categorical in F, etc. This means, consequently, that rule (5) implies rule (4), and this in turn implies (3), and so on. In other words, each one of the lects except the following constitutes a recapitulation of the path followed by the immediately following process of change. Taking into account the temporal axis, this means that in the implicational pattern $G \Rightarrow F \Rightarrow E \Rightarrow D \Rightarrow C \Rightarrow B \Rightarrow A$, what is implied by the other is anterior to the latter. This means that the change (1) clearly was anterior to rule (2), this in turn preceded (3), and so on, until we research the most recent rule, that is (6). This can be formulated in the following way: (1) > (2) > (3) > (4) > (5) > (6), that is what is less than the other is posterior to the former.

R U L E S	L E C T S						
	A	B	C	D	E	F	G
(1) /V?/ → \bar{v} / $\left\{ \begin{array}{l} - \#(\#) \\ + \end{array} \right\}$	-	x	+	+	+	+	+
(2) /V?/ → \bar{v} / — C	-	-	x	+	+	+	+
(3) /?/ → \emptyset / C —	-	-	-	x	+	+	+
(4) /?/ → \emptyset / v_i — v_j	-	-	-	-	x	+	+
(5) /?/ → \emptyset / v_i — v_i	-	-	-	-	-	x	+
(6) /?/ → \emptyset / $\left\{ \begin{array}{l} C \\ v \end{array} \right\}$ # —	-	-	-	-	-	-	x

Viewing the matrix from bottom to top, we note that (6), being more recent, has a minor diffusion (actually this is a variable rule for lect G); rule (1), on the contrary, being the oldest, has a wider diffusion among the lects. Note that the changes begin as a variable rule (x), and only then they are categorical (+). Viewing from top to bottom, the matrix illustrates the fact that lect A is completely immune to the set of rules (i.e. is the most conservative lect), but B began to be affected by rule (1) (see our previous discussion in 1.1.1.), and C contains it as a categorical rule, and so on. That is why I said that B recapitulates a prior stage through which C passed already, and this lect in turn repeats the history of D, and so on. This being so, we can safely say that rule (1) represents the original change; from this, gradually, the rule attacked more environments thus becoming generalized. In this fashion, we can even predict the directionality of the change: thus we can say that through time lect A will incorporate the change which already reached lect B, and this in turn will accomplish the change observed in C, etc. Hypothetically, the change will reach its completion when all the pigeon-holes of the matrix contain only (+).

This is then an example of a rule generalization which in its very beginning applied only to derived environments, and only then proceeded to non-derived inputs. As we have seen, the change attacked the glottal stop before word boundary and propagated through the lexicon. It can

perhaps be argued that since word boundary coincides sometimes with actual pause, the change began originally in the prepaused (phonetic?) environment and subsequently propagated by rule generalization to other environments. The change therefore would not be a good example of genuine morphologically conditioned change. However, recall that the change takes place not only before actual pause but also in certain suffixes where such a pause simply does not exist. Therefore, a natural conclusion seems to be that the change in question is grammatically conditioned from its inception. Notice furthermore that a similar change is taking place in Ñuha-Wanka, where a variable rule governs the loss of /x/ (counterpart of /ʔ/, both coming from */q/). Thus we have cases like [átux] 'fox', [yúlax] 'white' side by side with [sulxú+śa] from /sulxu+śax/ 'I'll remove (it)', but [sulxu+śa^h+mi] 'I'll remove (it)'. We see in these examples that whereas /x/ drops in the suffix -śax 'first person future' (as well as in other suffixes that contain a final /x/), the same is not true not only for the lexical items atux and yulax, but also for the verb root sulxu- 'to remove' where the velar phoneme remains untouched; note also that the velar is changing into aspiration.

2.2. The depalatalization of /ñ/. As we have seen in 1.4., this change affects suffixes only. Of the two suffixes involved, we noted that the narrative -ña? is the most constant in the change, whereas the inceptive -ña sometimes alternates with the unchanged form. The rule is, however, a general one among the northern Quechua I lects, beginning from Tarma and Yauli (which borders Ñuha-Wanka) up to the limits with the dialects of Quechua II. While in Ñuha-Wanka, except for two spots (Masma and Molinos, where we find -nax) and the bordering villages of Ricrán, there are no traces of this change, in Waycha-Wanka however we find it. As there is no contact at all between this lect and the rest of the depalatalizing lects of QI, we must assume that the change is an independent drift. Parker (1971:66-70) studying this change among the QI area of Ancash (cf. his table 4) concludes that "everything seems to indicate that the change began in the environment of a morpheme boundary"; thus in his table 4 (p. 68) the two suffixes -ña and -ñaq show the most widespread change, whereas the generalization across the lexicon is gradually less diffused, and at least in one case (the word ñatin 'liver')

the rule is a variable one in the most innovating lect.

Thus, as in the former case, here again we see how a rule spreads leftward, from the suffixes to the roots, that is from derived to non-derived environments. In the Wanka case one may ask why the change seems to be, so to speak, fossilized in the two suffixes only. To this we may answer first of all that it is not true that the change is entirely frozen, since we noted that the inceptive is sometimes used in its unchanged form; secondly, of the three Wanka lects, the Waycha variety is disappearing (recall note 7) rapidly due to the increasing predominance of Spanish. These two facts, I think, explain perfectly the apparent stagnation of the change, and on the other hand do not invalidate my claim.

2.3. From the examples discussed in the two preceding sections, it wouldn't be too adventurous to say that the remaining cases studied are also examples of sound changes which began applying to suffixes, and secondarily began to affect the roots (an exception being the glottal metathesis rule which seems completely petrified). What is important to note is the fact that none of these instances show traces of a morphologization of phonological rules.

2.4. Aside from the depalatalization of /ñ/ among the Quechua I lects of Ancash which Parker demonstrated to have begun "in the environment of a morpheme boundary", there are other changes that have the same type of restrictions. Thus Parker (1971:67-68) says: "That a change should begin in suffixes and then spread to roots is not surprising if we know that two other changes in Quechua are known to have the same constraint: (1) *y > i in parts of Ancash (...); and (2) final *p > x in Cuzco-Bolivian (...)". With respect to the first change he mentioned (p. 80) that it has "the peculiar constraint that it operates only when a morpheme boundary (or internal word boundary) is adjacent to //y//"; thus "it does not affect root-internal //y//", as in /huytu/ 'oblong', /luycu/ 'deer', etc.

Furthermore, there is among different varieties of Quechua a cluster simplification process which operates in suffixes only. Thus Parker (1971:98) states: "In Quechua generally there is a tendency to simplify suffixes and combinations of the shape -CCV, almost always by dropping the second consonant". He then proceeds to list the following cases:

Bolivian -sa ~-śa < *-čka 'durative', Cuzco -yU < *-yU 'augmentative' (also observed in Tarma, cf. note 8), Ayacucho -ra ~-rqa < *-rqa 'past definite tense' (also observed in Wanka, cf. the discussion in 1.7.1.), and Junín -yā < *-ykā 'durative' (a change we are familiar with). He also mentions the fact that in the commolect of Antonio Raymondi *-rqa, *-rqu, and *-śqa (cf. with the situation in Ñuha-Wanka in 1.7.1.), all of them tense markers, "lose *q regularly by a variable rule".

All these changes listed suggest that the tendency of sound change beginning in suffixes is perhaps a language-specific universal in all of Quechua lects.²³ As I have stated earlier, the reason why this is so needs to be carefully explored, and perhaps the explanation might have something to do with the agglutinative character of this language. Thus, an urgent task would be to look for similar types of changes among languages of the Quechua type. As Parker (1971:99) says, "changes of this type deserve greater attention than they have received to date".

FOOTNOTES

* I am grateful to Professor Hans H. Hock for his criticisms and for suggesting to me many improvements, both in form and content, for this paper. His ideas will be apparent at many places in this paper, nevertheless it would be unaccurate to say that he agrees with everything I say. I should also thank Professor Charles W. Kisseberth for his helpful comments. All errors of fact and/or interpretation are my own.

¹ Since the term "dialect" is rather misleading, sometimes being defined in terms of extralinguistic criteria, the practitioners of the dynamic model (see note 2), especially Bailey and his followers, prefer to use more appropriate terms such as lect and isolect. These concepts are definable by linguistic criteria alone. Thus, "a particular speech form, with respect to a particular linguistic innovation, is an isolect in one of three possible ways: (1) it lacks the innovation; (2) it has the innovation as a variable rule; or (3) it has the innovation as a categorical rule". And "lect is a speech form so defined for all the innovations in the language or for some specific subset of them". Cf. Parker 1971:46-47. See also Bailey 1971a: I, 11-12 and Bailey 1973.

² A detailed characterization of each of these paradigms, as well as an evaluation of them, can be found in Bailey 1971b, also in Bailey 1971a: I, 37-39.

³ For a justification of this point, as well as for the theoretical considerations concerning the naturalness of polylectal grammars, see Bailey 1972a.

⁴The cases I present are also demolishing counterexamples to the claim recently made by the adherents of the so-called "natural generative phonology", since they maintain that sound change is stutable in purely phonetic terms. Cf. Hooper 1974.

⁵Cf. Cerrón-Palomino 1973.

⁶I should note incidentally that this rule does not apply to forms such as mamá 'my mother', wasí 'my house', awsá 'I play', mikú 'I eat', etc., since in these forms the vowel lengthening is marking the first person singular actor and allocator. Therefore, this morpheme (which we may represent as $-\bar{v}$) has to be marked somehow as [- Rule (7)].

⁷Torero (1964:470A) reconstructs it as $*-yka$, that is without vowel lengthening. His reason was perhaps the fact that vowel lengthening in some of Quechua I lects is a by-product of more recent changes, especially as a result of the drop of certain consonants in syllable final position (cf. 1.1.2. above). However, evidence from Wanka suggests that the length of the vowel in the durative cannot be attributed to compensatory phenomena. Thus, there is no doubt that the long vowel is native to Proto-Quechua I; cf. Parker 1971.

⁸In these communities as well as in others (especially on the left side of the Mantaro River) Wanka is in the process of disappearing, even old informants being difficult to find; some of these do recall rather vaguely a few words. However, since those two communities are enclosed by $-y\bar{k}\bar{a}$ preserving lects, we can safely infer that their /k/ was not elided either.

⁹However, in the communolect of Huacrapuquio (Waylla-Wanka), one of my informants (43 years at the time I elicited my data) told me that he used to listen to his mother and elder persons saying, for example, [mikú+yuy] from /mikuykuty/ 'try to eat (it)', and also, more dramatically, [uyú+?luy] from /uyku+?luy/ 'give (it) to him/her/it', [ayú+?luy] from /ayku+?luy/ 'bring (it) in', etc. While this fact needs to be checked more carefully, we may perhaps explain the situation as follows. It is possible that the change /k/ → ∅ after /y/ was a more general rule in Huacrapuquio and only here, affecting not only the durative but also the augmentative and even certain roots. Subsequently, under the pressure of the surrounding dialects, Huacrapuquio undid the generalization at least root internally and in the augmentative suffix also.

The change $-y\bar{k}\bar{u}$ → $-y\bar{u}$ 'augmentative' was also encountered in the communolect of Canchayllo (Shawsha-Wanka). Thus, we have forms such as [samayú+šun] from /samayku+šun/ 'let us take a rest', [samayú+ša] from /samayku+ša/ 'tired', but [šayku-] 'to stand up', etc. The fact that here /k/ drops in the augmentative can be attributed to an influence of the Tarma-Yauli lect on which Canchayllo borders. In the former lects the augmentative regularly loses its /k/ (and, of course, here $-y\bar{k}\bar{a}$ is $-y\bar{a}$, as expected). Another variety where the same drop takes place is Cuzco Quechua (here $-y\bar{k}\bar{a}$ does not exist). Note, however, that in both cases the change operates on these suffixes only.

¹⁰The only important variation I have found is what would appear to be a further development in the change of -ykā, and this is the drop of the intervocally derived yod in -yā. Thus, in the commulect of Muqui, which borders Huancani, the last kaista area) I noticed in the speech of an 84 year old woman forms such as [puli+ku+wá+ŋki] from /puli+ku+yka+nki/ 'you are walking', [asi+ku+wá+ŋki] from /asi+ku+yka+nki/ 'you are looking for', etc. (where the nonpermissible vowel sequence is eliminated by the epenthetic w). In view of the scant data I have for that commulect, I cannot say whether this change is regular or idiosyncratic; however, aside from Muqui, I did not find any other community showing that type of change. It is dubious then that it can be taken seriously as a regular change in progress, except possibly for that community.

¹¹Torero (1964:451B-A, 470A) mentions similar changes in some commulects of the provinces of Cajatambo, Chancay (Lima), and Daniel Carrión (Pasco), although in some of them palatalization seems to apply across the board also (in the same environment as in Sicaya). Creider (1967) also observes the intermediate stage -yt^hyā for Chancay, as a variable rule.

¹²The only grammar written we have for the Wanka lects, that of the Franciscan friar Francisco José Ráez (1917), has -yka 'durative' (and in a foot note he says, "algunos suprimen la c de este interf. por ej: dicen caian en lugar de caican", cf. p. 149), and also -ka 'determiner' (where he fails to "reconstruct" the final /ʔ/, which he represents by h otherwise, but notes that in some places the c is "syncopated", as in hualass-a for hualass-ca 'the boy'; cf. p. 54). From this it would seem that the variety he describes is that of Sicaya, where it is known he was a priest for a time; but what casts doubt on this is the fact that he gives -cū for the locative and -nu for the comparative (here as elsewhere he does not pay much attention with respect to the transcription of long vowels); however, as will be seen in 1.7. below, Sicaya has -naw for the comparative. For this reason I think that Ráez's grammar cannot be identified with any of the varieties of Wanka; in this sense it is better to consider it as an attempt at a panlectal grammar.

¹³As I have said, historically it seems transparent that in both -ykā and -kaʔ, especially in the latter, we are confronted with a by-product of the suffixation of the verb *ka- 'to be'. This being so, to what extent can it be said that the elision of /k/ was due to the fact that this segment was next to a word boundary? To this, one may answer by saying that even if we correlate word boundaries with actual physiological pauses, why is it that the same change did not affect other suffixes which historically seem to contain the same root *ka-? I am referring to suffixes such as the durative-simultative -cka, the pluralizer -lka, etc. In view of this, clearly the elision of /k/ has affected idiosyncratically ʔ: the palatalization of -ykā, since the quasi-homophonous -yku ~ -yka 'augmentative' also seems to have been bimorphemic.

¹⁴This change is also common in other varieties of Quechua, including the Ecuadorian variety. Thus in the neighbouring lect of Tarma-Yauli this morpheme drops regularly its /k/, except in word final position; thus we

have situations such as [miku+na+nčí+baq] from /miku+na+nčik+paq/ 'for us to eat', [yača+yā+nčiči+m] from /yača+yā+nčik+mi/ 'we (incl.) are knowing', but [mamā+nčik] 'our mother', [nuqā+nčik] 'we (incl.)', etc. In view of this situation one may perhaps argue that the drop of /k/ in Wanka is a by-product of dialectal borrowing. However, even if this were true, it still remains to be explained why is it that the change observed in Tarma-Yauli affects to that suffix only.

¹⁵This is especially true for the Ecuadorian group of Quechua. Cf. Parker 1969:154ff.

¹⁶The only exception to this rule is li+ku- 'to go (ethical dative)' which synchronically should be analyzed as bimorphemic (cf. li+n- 'he/she goes'). The fact that here -ku does not voice can be perhaps attributed to univerbation whereby the whole sequence liku- is interpreted as a single root (cf. miku- 'to eat', taku- 'to blend', etc.). Incidentally, that this is not an ad hoc explanation can be proved by the fact that Quechua shows an astonishing process of univerbation of suffixes; thus cf. verbs such as *ya+yku- 'to enter', *ya+l?u- 'to get off', *ya+lku- 'to climb up', *ya+lpu- 'to get down', etc. where the second element in each case was clearly a suffix which historically became completely amalgamated with the root, which per se is now devoid of sense.

¹⁷One may ask whether the monophthongization process observed in Wanka is merely a propagation of the more generalized process found in Ancash. To this I must answer by saying that: (a) the Wanka lects do not border on the Ancash variety; (b) the Tarma-Yauli variety, on which Wanka borders, has uniformly -čaw (although it presents monophthongization of the comparative, realized as -nuv); and (c) the immediately neighbouring variety of Wanka (i.e. Nuha-Wanka) lacks the comparative, and therefore the potential linkage between the Tarma form -nuv and the -nū ~ -nu alternation found in Ya?a-Wanka is broken. In view of this, it seems safe to conclude that the monophthongization of /aw/ in Wanka is an independent development (= convergence), and, as such, another good example of a morphologically conditioned sound change.

¹⁸For a length study of the treatment of Spanish mid vowels /e, o/ in borrowings, see Cerrón-Palomino 1974.

¹⁹A change from *-ma → -wa 'directional' can however be postulated for Proto-Quechua II; again, here we have a case where only the speaker object suffix is affected by this "non-regular" change. Cf. Parker 1969:151.

²⁰That /n/ is easily elided can be seen again in the sequence -n? which disappears altogether in lect G. Thus, we have /sin?a/ → [sɨʔa] 'nose', /un?a-/ → [úwa-] 'to forget', /tan?a/ → [tā-] 'to push', etc. It seems that in certain lects the nasal disappeared first (thus in Carhuacallanga we have forms such as [sɨʔa], [úʔa-], [tāʔa-], respectively), but in others it is the glottal that went first (thus Chongos Bajo [sɨʔa], [uʔa-], and [taʔa-]). But again in the former case I was unable to find intermediate steps such as [sɨʔa], [úʔa] or [tāʔa-]. This, in a way, would seem to contradict the claim made in the sense that nasal dropping is always

preceded by a prior nasalization of the preceding vowel; however, it may well be the case that a kind of rule "telescoping" is involved here.

²¹Parker (1969:150), following Torero (1964), sets up the change $\hat{V} > Vy$ in the evolution of Quechua II (= A in Parker's notation); this change applies only to the first person affix to produce Proto-Quechua II $*-y$ 'first person singular (actor and allocator)'. The other alternative, which would be to reconstruct $*-y$ for Proto-Quechua and then assume a change $Vy > \hat{V}$ in Proto-Quechua I, runs, according to Parker, into serious difficulties since "we must explain why the first person undergoes such a change while infinitive $*-y$, imperative $*-y$, second person $*-yki$, and many roots are unaffected". Having seen cases of sound change that affects only specific morphemes, I think that Parker's reticence can no longer be taken seriously. The examples provided in this paper make viable either of the alternatives; thus the problem still remains as to which one was the correct.

²²For this and the following discussion I follow Bailey 1972b.

²³However, interestingly enough, Dressler (1973:135) points, although tentatively, the following for Latin: "On peu établir que le développement phonique de désinences et suffixes anticipe, parfois, des changements généraux postérieurs. Ainsi les monophthongaisons de ae et ei flexionnels semblent précéder les changements correspondants dans les lexèmes, quoique les témoignages ne soient pas abondants ou faciles à interpréter (à cause d'influences dialectales)".

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