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AUTHOR Parker, Gary J.
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ABSTRACT

It is possible to observe phonological innovations in Quechua B in purely linguistic terms, abandoning the use of dialects and subdialects. Isolect and lect are used instead. A particular speech form, with respect to a particular innovation, is an isolect in one of three possible ways: it lacks the innovation; it has the innovation as a variable rule; it has the innovation as a categorical rule. A lect is a speech form so defined for all the innovations in the language or for some particular subset of them. The author discusses several phonological innovations in Quechua B and is able to establish lects for the language based on the innovation. Where possible, the evolution of the innovations is noted. Grammatical innovation is also discussed in the area of syntactic differentiation in the distribution of suffixes. Tables illustrate the distribution of particular innovations; maps show geographical location. A list of references is provided. (VM)

COMPARATIVE QUECHUA PHONOLOGY AND GRAMMAR V:

THE EVOLUTION OF QUECHUA B[1]

Gary J. Parker

1. Isolect and Lect in QB. The first four installments of Comparative Quechua Phonology and Grammar (CQPG) followed the format of first describing the reconstructed Proto-Quechua, in a largely synchronic descriptive framework, and then introducing the recorded Quechua forms lacking from PQ as innovations in progressively more recent nodes in a family tree model. This approach seemed to work fairly well for the Quechua A branch treated in CQPG-IV "The Evolution of Quechua A", though even there it must be viewed with suspicion since the well described forms (Ayacucho, Cuzco, Bolivian) constitute large and relatively homogeneous speech areas while the poorly known forms (Ecuadorian, Northern Peruvian, Argentinian) show high degrees of diversification. In the case of Ecuadorian a rather complex but seemingly well defined family tree classification was given, but the underlying data were very sketchy and a number of important problems were left unsolved. In Northern Peruvian it was not even clear whether the eastern speech areas (San Martín, Loreto) should be included in the branch, and recent research on the western speech areas (Lambayeque, Cajamarca) by Alfredo Torero and Augusto Escribens has shown that they contain many elements previously thought to be innovations

in Quechua B. Argentinian appears to be quite homogeneous but shows an odd lexical distribution of phonological innovations that suggests a mixed origin.

In the present study the family tree model must be abandoned. The Quechua B area of central Peru shows a great deal of differentiation but the many isoglosses are independently distributed to such an extent that only a wave model can accurately represent the linguistic facts. The mixed tree-plus-wave classification of QB dialects in CQPG-I does have a certain intuitive plausibility, but since it mixes linguistic and political factors it will be of little use in the present context. The terms "dialect" and "subdialect" must also now be abandoned, in favor of terms that are definable by linguistic criteria alone. In referring to forms of QB by criteria other than political and/or geographic ones, the terms "isolect" and "lect" will be employed.[2] A particular speech form, with respect to a particular linguistic innovation, is an <u>isolect</u> 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.[3] For example, in the following pages the monophthongization of the Proto-QB diphthongs (*ay>ē, *uy and *iy>ī, *aw>ō) is designated as "Rule 8": the area of Huari, Ancash, is an isolect [-Rule 8] since it lacks the change; Antonio Raimondi, Ancash, is an isolect [xRule 8] (where <u>x</u> indicates a mid or variable value) since it has the innovation as a variable rule; and the Callejón de Huaylas is an isolect [+Rule 8] since it has the innovation as a categorical rule. A <u>lect</u> is a speech form so defined for all

the innovations in the language or for some specific subset of them.

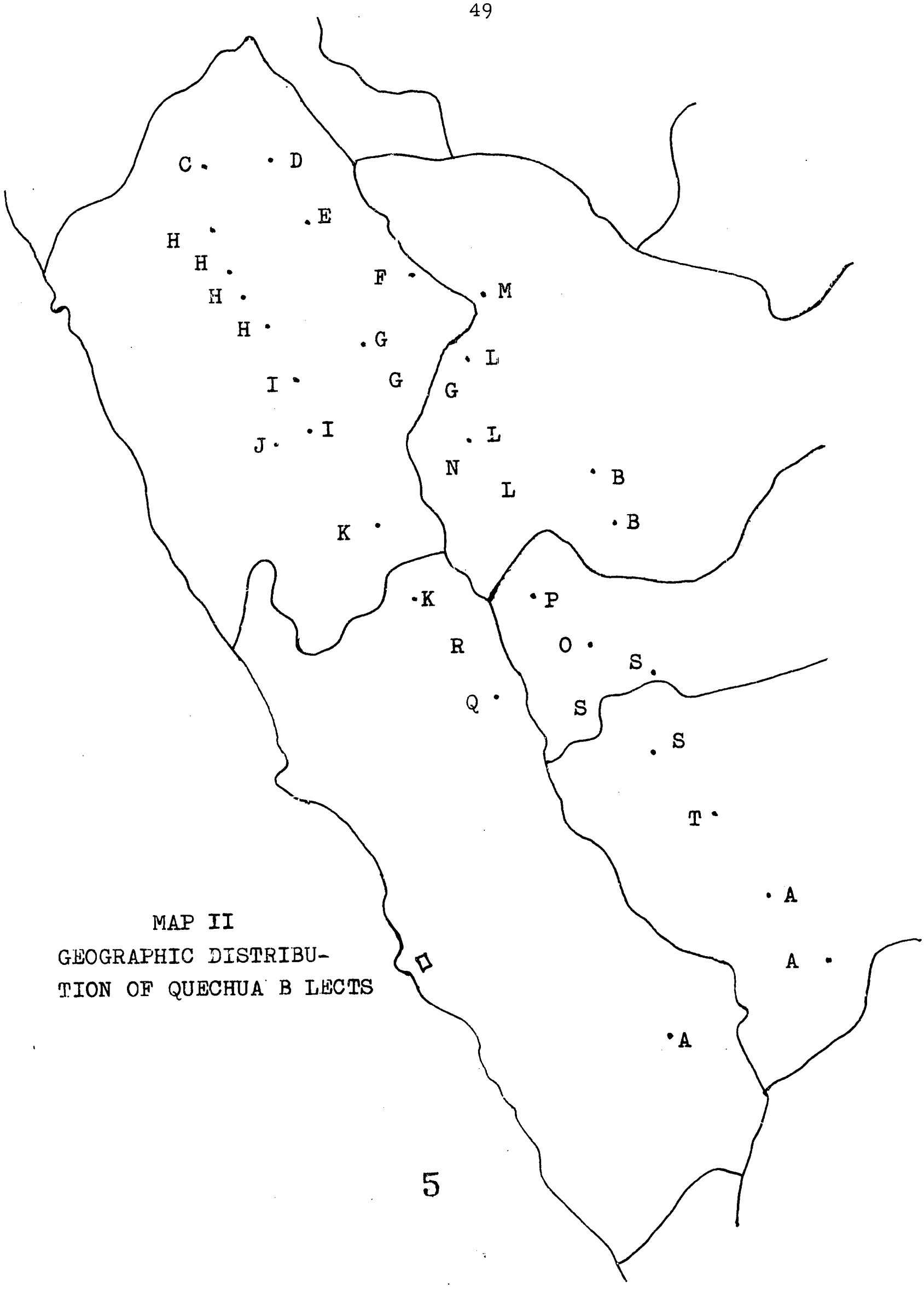
Map I is a rough political map of the QB territory. All the towns are provincial capitals except four: Arancay and Paucartambo are district capitals, and Picoy and Yanacocha are not even located on any map known to me, but all four are treated in published linguistic or ethnographic descriptions and serve as useful reference points for present purposes.

Table 1 shows most of the configurations of phonological changes observed in QB. The rules are identified in highly abbreviated form, with the geographically more widespread ones higher in the table. Each number indicates a single rule in the synchronic sense, and the subscript letters indicate successive stages in the evolution of the rule. For example, 2a identifies the initial stage of s-velarization which is limited to word-initial position; 2b is a later stage in which the rule has been generalized by dropping the word boundary from the environment so that the rule now applies to every prevocalic *s, medial as well as initial. 4a identifies the unconditioned depalatalization of *ñ, and 4b shows a generalization of the tautosegmental environment such that the rule now applies to both palatal sonorants. 8a, b, and c identify three main stages in the monophthongization of the Proto-QB diphthongs, and 8c´is a generalization of 8c.

Certain intrinsically ordered subsets of changes can be

MAP I

THE QUECHUA B REGION



MAP II
GEOGRAPHIC DISTRIBU-
TION OF QUECHUA B LECTS

5

noted: 3 operates entirely on the output of 2_b, and 7 on the output of 5.

Letters on the horizontal axis identify the configurations of QB phonological innovations. Blank cells in the table indicate absence of innovations; x indicates that a rule either has affected only part of the lexicon, or is present as a variable rule;[4] and plus indicates presence of a categorical rule. Since rules 1 through 8 are ordered in linguistically and geographically significant ways on the vertical axis, the sequence of configurations--lects--is also significant. (Rules 9 through 16 are independent of 1 through 8 and of each other, and their omission from the table would only have the effect of reducing the number of lects from twenty to sixteen.) Map II shows the geographic locations of the lects. Questions of boundaries between lects are taken up in section 2 below. Letters which are consecutive and also close in geographic space indicate areas that are relatively homogeneous linguistically, and conversely, consecutive letters that are far apart geographically indicate areas that share relatively few phonological changes. Thus lects A, B, and C are geographically distant and linguistically very diverse, while H, I, and J are geographically connected and very similar linguistically (with non-contiguous H and J less similar to each other than either is to I). A and B are lects identified as "Huanca" and "Chupachu"--here corrected to "Chupaychu"--respectively in CQPG-I, and C is the lect of Corongo. In CQPG-I Corongo was not identified as a strictly linguistic entity,

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
1 $\{^{l}_{a}\}$yá>$\bar{a}$	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
2a s>h/#_	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
2b s>h/_V				x	+	+	+	+	+	+	+	+	+	+		+	+	+	+	+
3 h>Ø/V_x_V_y						+	+	+	+	+	+	+	+	+		+	+	+	+	+
4a ñ>n				x	x	x	x	+	+	+	+	+	+		+	+	+	+	+	+
4b Ĭ>l											+	+			+	x	+	+	+	+
5 č>c			+	+	+	+	+	+	+	+	+	+	+			+	+	+		
6 č>č		+		+	+	+	+	+	+	+	+	+	+	+						
7 c>s											+	+	+					+		
8a ay>$\bar{e}$/_$\{^{C}_{\#}\}$			x			x		+	+	+										
8b uy>$\bar{i}$/_$\{^{C}_{\#}\}$/+			x			x		+	+	+										
8c aw>$\bar{o}$/C_p_$\{^{\#}_{p}\}$						x		+	+											
8c' aw>$\bar{o}$/_$\{^{C}_{\#}\}$			x							+										
9 q>ɣ/_V		+				+	+				+	+	+	+	+	+	+	+	+	
10 h>Ø/#_			+					+												
11 $\{^{i}_{u}\}$>$\{^{e}_{o}\}$/P_1			+					+					+				+	?		
12 aq>$\bar{a}$,'+C_#						+	+													
13 q>x			+																	+
14 q>?	+																			
15 r>l	+																			
16 $\{^{p}_{k}\}$>$\{^{b}_{g}\}$/X_V																				+
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T

TABLE 1

SOUND CHANGE CONFIGURATIONS IN QUECHUA B

though more recent research has shown it to be such. Huanca, Chupaychu, and Corongo share no innovations more recent than Proto-QB. Lect H is located in the northern provinces of the Callejón de Huaylas (Huaylas, Yungay, Carhuaz), and lect I in the southern provinces (Huaraz, Recuay); these are the forms of QB labelled "Northern Huaylas" and "Southern Huaylas" in CQPG-I and other of my recent studies. J is the province of Aija, which in the absence of data was suspected of being linguistically identical to Southern Huaylas; recent research has shown it to differ in certain ways. Table 1 shows that Corongo (C) and Northern Huaylas (H) share several relatively local innovations while differing with respect to more widespread and presumably older innovations. This situation must reflect a rather recent spread of changes from Northern Huaylas into Corongo. Note that while the two areas appear adjacent on a political map, they are in fact separated by a formidable geographic obstacle--the Cañón del Pato. A very similar situation is seen in the relationship between the lects of the Callejón de Huaylas (H-I) and the lect of the province of Antonio Raimondi (F). In this case we find x-valued rules in F due to recent spread across the geographic obstacle of the Cordillera Blanca.

The distribution of lects on Map II suggests that the southern half of the QB territory has undergone less differentiation than the northern half. This is surely an illusion

reflecting the fact that much more is known of the northern half, especially of the department of Ancash. The Quechua of the departments of Lima, Pasco, and Junín is known mainly from the dialectological work of Alfredo Torero (1964, 1968) and from the descriptive studies of Cerrón (1967, 1969), Creider (1967, 1968), and Escobar (1967). My research on Ancash Quechua, especially the previously unreported results of fieldwork during the summer of 1970, will allow us in this study to examine this area in far greater detail than others.

Lects A through T, and certain subdivisions defined by highly local innovations not included in Table 1, are discussed in the following sections in terms of the innovations that define them.

2. Phonological Innovations in Quechua B.

2.01.

$$(1)\ \begin{Bmatrix} *a \\ *i \end{Bmatrix} ya \Rightarrow \bar{a} \ /\ X$$

This change in Proto-QB (PQB) may be considered as the earliest in a sequence of processes that account for the contrastive long vowels in QB. The data indicate a loss of *y following a non-round vowel and preceding *a, with restructuring of the new vowel sequence as PQB *ā.[5] (It may well be that the first person marker is best treated as a source of contrastive vowel length in PQB, though in this case the vowel length would be rule-produced rather than lexical.[6])

The environmental X in Rule 1 refers to some constraining factor(s) that I have not been able to formulate with complete

certainty. In order to examine the problem i: will be helpful to see the whole--but small--corpus of relevan forms. On Table 2 an indented form contains the same roo as the last unindented form above it. Parenthesized suffixe in the Proto-QA and Pre-QB columns are optional (i.e. rule-p oduced and thus not part of dictionary entries), whereas t e unparenthesized suffixes in the QB columns are obligatory (i.e. part of the dictionary entries, resulting from idiom-fo mation). As is pointed out in the discussion below, the com lex [-Rule 1] stems may really be later, local formations wit in QB.

The discrepancies between the Pre-QB and Pr to-QA forms here reconstructed present some interesting ety ological problems, but if the Pre-QB reconstructions are acc pted it appears that the change has occurred when the non-round vowel preceding *y was in an unaccented syllable. Looking firs at the four noun roots in Table 2, we find that the change as affected trisyllabic *qayara and *niyani, where the rule of penultimate syllable accent assigns greater pitch and lengt to the *a following *y, but not *yaya and *aya. The case of PQB *niyani : PQA *nan leaves open the question of the form of this morpheme in PQ; a morpheme-specific change seem to have occurred, and either of the protoforms would be a reasona le reconstruction for PQ. *apa-yakuy 'flood' appears to be rare example of a compound stem, containing the roots *apa- 'to carry' and and *yaku 'water'.[7]

Most of the forms in Table 2 are verbal, an it is conspi-

	Attested QB	Pre-QB	Proto-QA	Gloss
[+Rule 1]	qāra	*qayara	*qayara	'maguey leaf'
	nāni	*niyani	*ñan	'path, road'
	apākuy	*apa-yakuy	?	'flood'
	šāri-	*šayari-	*šaya(ri)-	'get up'
	šāku-	*šayaku-	*šaya(ku)-	'stand, stop'
	pāri-	*payari-	*pawa(ri)-	'fly, jump'
	tāku-	*tiyaku-	*tiya(ku)-	'sit, reside'
	tāri-	*tiyari-	*tiya(ri)-	
	tāyku-	*tiyayku-	*tiya(yku)-	
	čā-	*čaya-	*čaya-	'arrive'
	wāta-	*wiyata-	*uywa-	'care for, raise'
	-rā	*-raya	*-raya	Excessive DVV
	-pā	*-paya	*-paya	Repetitive DVV
	-nā	*-naya	*-naya	Desiderative DVV
[xRule 1]	maya-	*maya-	?	'find out'
	māpa-	*mayapa-	?	'realize'
	māku-	*mayaku-	?	'feel (pain)'
[-Rule 1]	yaya	*yaya	*yaya	'father'
	aya	*aya	*aya	'corpse'
	wiya-	*wiya-	*uya-	'hear'
	wiyačaku-	*wiya(čaku)-	?	'listen'
	haya-	*haya-	*haya-	'be hot (spicy)'
	qaya-	*qaya-	*qaya-	'call'
	qayapā-	**qaya(paya)-	?	'insult'
	riyaku-	**riya(ku)-	*rička-	'awaken'

TABLE 2

THE DEVELOPMENT OF *ā IN PQB

cuous that the change has affected primarily those stems in which a deverbative verbalizer (DVV) optional in PQ has become obligatory in PQB. That is, the change affects derived stems wherein the accent could not be assigned to the vowel preceding *y. Among the [-Rule 1] forms, // wiyačaku-// , // qayapā-//, and // riyaku-// look like exceptions to the rule, but on closer inspection they seem to be explainable. The first two are idioms not recorded in QA, so we may consider them as formed in QB after the change producing PQB *ā had ceased to operate. (Both // wiya-// and // wiyačaku-// , furthermore, may be treated as showing an idiosyncratic restructuring *wiya- from earlier *uya-, if the QA forms are taken as older, since *uya- does not show the environment required by Rule 1.) // riyaku-// appears to be cognate to PQA *rička- though some drastic irregular change has taken place; if // riyaku-// is a more recent development this would explain its exemption from the change in question. Reflexes of *rička- have also been recorded in QB (the Vocabulario Políglota Incáico, Misioneros... 1905, gives them for "Junín" and "Ancash") but until more is known of the distribution of the two stems no better hypothesis of the history of *riyaku- is possible.

Among the [+Rule 1] forms in Table 2 *ča̤-, *-rā, *-pā, and *-nā seem to have undergone the change even though they lacked the hypothesized environment. To see how these morphemes could exhibit the change to *ā while *haya-, *qaya-, and *wiya- do not, it will be helpful to recall certain facts about the

structure of verbal words. While it is common for noun roots to occur as whole words, verb roots cannot--a verbal word must contain at least one suffix, and the great majority of suffixes are a whole syllable in length. The DVV suffixes alone allow for many thousands of stems to be derived from each root. There is a total of only four inflected forms and four nominalized forms possible which do not add a syllable to the root and thus do not produce the condition hypothesized as necessary for the operation of Rule 1. To illustrate with *ʧaya-: *ʧayā 'I arrive', *ʧayan 'he arrives', *ʧayay 'arrive!', *ʧayar 'arriving'; *ʧayaq 'he who arrives', *ʧayay 'to arrive', *ʧayaš 'the fact that one arrived', *ʧayat 'the state of having arrived'.[8] All other possible forms have three or more syllables, thereby effecting accent-placement on some syllable later than the first one in the word. *-rā, *-pā, and *-nā are suffixes rather than roots (though *nā may be a root rather than a suffix in some QB lects; compare its function in the Ayacucho lect of QA as described by Parker 1969_e: 76-7), but the same argument applies to them because they occupy the first position class among the DVV suffixes. In view of these facts we may posit a period of alternation with, e.g., *[ʧáyaŋ] beside *[ʧámuŋ], and *[qáyaŋ] beside *[qámuŋ] (where DVV *-mu Directional is an arbitrary choice from among all the suffixes in the language except the eight mentioned above). The present-day situation, then, shows rule 1 having disappeared as a morphophonemic rule while resulting in restructuring of

some morphemes but not others.

The [xRule 1] root *maya- and its derivatives lend added support to the hypothesis that position of accent is relevant to the change. But even in this case no lect is reported as showing alternation: // māpa-// and // māku-// are reported only in H and I, and // maya-// only in F, Q, and T.

As a final note, something should be said regarding the reconstructions *payari- and *wiyata- since if they are unjustified the evidence for Rule 1 is weakened. In the first case, one form with *y is recorded: // parya-// in Cajamarca (Torero 1968: 303). Cajamarca is a QA lect that shows lexically sporadic instances of changes that are regular in QB, and Torero interprets this situation as pointing toward a migration from the highlands of Lima; if his analysis is correct // parya-// is not necessarily evidence that the PQ morpheme contained *y rather than *w. In the case of *wiyata- vs. *uywa- we again encounter the problem of whether there has been an irregular change PQ *w > Pre-QB *y or PQ *y > PQA *w. Since there is no unambiguous evidence of a Pre-QB change *Vwa > *ā, I am rejecting the possibility of reconstructing Pre-QB *pawari- and *wiwata-. The resyllabification in *wiyata- is irregular, but presents no additional problem (cf. QA *uya- : QB *wiya- above). The third syllable of *wiyata- can be tentatively identified as a verbalizer *-ta that has just recently been discovered in several lexemes, e.g. // wira// 'fat' : // wirata-// 'to grease'; // yawar// 'blood' : // yawarta-//

'to bloody'. This apparently unproductive suffix in QB can be identified with the // -ta// found in several lexemes in the QA lect of Ayacucho; see Parker 1969e:102.

2.02a. (2a) *s > h /#___

The initial stage in the velarization of PQ *s appears in Table 1 as an innovation in PQB, but a potential qualification must be mentioned before proceeding. Torero (1964:453) states that the change has not reached the region of Jauja--the northern part of lect A. I am hesitant to incorporate this into the present scheme for two reasons. (1) Torero does not present or describe his evidence. The total number of attested QB roots for which an initial *s is indicated by QA cognates now stands at less than thirty, and many of these were probably not yet recorded when Torero was writing. Furthermore, he makes no mention of exceptions to his claim--Jauja roots showing initial *s > h--though we can hardly assume therefore that complete regularity exists. (2) We know from reports of the Spanish conquerers that Jauja (then Xauxa, Q *šawša) was one of the most important capitals in the Chinchaysuyu division of the Inca Empire; it was the site of an important temple, and was a major manufacturing center and storage depot. Cieza de León (407-8) gives the following account in 1553.

> En todas estas partes había grandes aposentos de los ingas, aunque los más principales estaban en el principio del valle, en la parte que llaman Jauja, porque había un grande cercado donde estaban fuertes aposentos y muy primos

> de piedra, y casa de mujeres del sol, y templo muy riquísimo, y muchos depósitos llenos de todas las cosas que podían ser habidas. Sin lo cual, había grande número de plateros que labraban vasos y vasijas de plata y de oro para el servicio de los ingas y ornamentos del templo. Estaban estantes más de ocho mil indios para el servicio del templo y de los palacios de los señores.

We can suppose that most of these artisans and yanakuna were natives of Cuzco who remained in the area after the sudden dissolution of the Empire. It appears then that Jauja, perhaps more than any other populated center in central Peru, showed the conditions favoring innovation by hypercorrection. An analogous situation probably exists in parts of Huánuco where an extensive area is known to have been settled by colonists from Cuzco, and through which the main Inca road brought a continual stream of soldiers and administrators. The scant records of Chupaychu, lect B, suggest a high incidence of initial //s// which is not predictable from linguistic factors.

Aside from the special situations of Jauja and Chupaychu, the QB lects all show a systematic phoneme //s// though it is relatively infrequent word-initially in roots whose etymologies are clear. The most problematic "exceptions" to Rule 2a have been six high-frequency roots that seemed to show //s// everywhere they were recorded. These are //supay// 'devil', //sipi// or //sapi// 'root', //sinqa// 'nose', //siki// 'base, bottom, rump', //supi// 'fart', and //suwa-// 'to steal'. But with the first efforts to record QB lexicon or a large scale these morphemes have begun appearing in forms with //h//, and usually in the

doublet situation. //supay// contrasts with //hupay// 'spirit, soul', //sipi// contrasts with //hipi-// 'to remove', //sinqa// contrasts with //hinqaš// 'shin', and //siki// contrasts with //hikpa// 'position behind; to walk backwards'. Among these h-forms only //hupay// is recorded at present beyond the department of Ancash, and it appears to always form a doublet with //supay// . The verb //hipi-// is known only from the Ancash provinces east of the Cordillera Blanca, where 'root' is always //maci//, and the noun //sipi// is known only from the Callejón de Huaylas where 'to remove' is always //hurqu-//; these forms thus do not constitute doublets in any of the few areas investigated so far. //hinqaš// east of the Cordillera corresponds to an irregular //šinqaš// in the Callejón. The historical identity of //sinqa// and //hinqaš~šinqaš// is clear when we note that in Corongo (C) and in most QA lects 'shin' is expressed as *čaki sinqa, literally 'nose of the foot', and that the final //š// in the Ancash forms is identifiable as a suffix. //hikpa// is recorded in the lects east of the Cordillera (D through G), and in D and E it alternates with //sikpa// . The second syllable of //hikpa~sikpa// is the historical genitive marker, and the second *i of the root has been irregularly lost.

The picture emerging is one of a deep stratum of [+Rule 2a] forms overlain by borrowings from Southern QA attributable to the Inca occupation.

For the convenience of other investigators the known PQB

stems with initial *h from PQ *s are now listed.

*haču 'tree; bush; branch'

*haka 'guinea pig'

*haʟqa 'puna'

*hama- 'to breathe; to rest'

*hapa- 'one alone; only'

*haqru 'palate'

*hara 'corn'

*haru- 'to step on'

*hasa 'difficult; to get angry'

*hati- 'to insert'

*hawa 'outside'

*hawna~*hawya 'pillow'

*hikpa 'position behind; to walk backwards'

*hinči 'strong'

*hinqaš (~šinqaš) 'shin'

*hipaš (~*šipaš) 'post-adolescent girl'

*hipi- 'to remove'

*hiqa- 'to climb; to rise; to hurry off'

*hira- 'to sew'

*hirka 'hill'

*hita- 'to throw'

*huk 'one'

*hupay 'spirit; soul'

*huqta 'six'

*huqu 'lead (metal); grey hair'

*hurqu- 'to remove, take out'

*huti (~*šuti) 'name'

*huytu (~*šuytu) 'long, lengthened, oblong'

2.02b. (2b) *s > h /[+Segment]___V

While Rule 2b shows a more specific environment than 2a, the innovation involved is in fact not a rule addition but rather a generalization (simplification) of 2a. In 2a a vowel following *s did not have to be specified in the rule formulation because there is a sequential constraint rule of Quechua morpheme structure that allows only a vowel after an initial consonant. Subsequent to the addition of 2a to PQB the rule (2a) was generalized by dropping the boundary preceding *s. The change in question, then, is a transition from 2a to the more general rule

(2) *s > h /___V

wherein the following vowel has become a categorical constraint: every syllable-initial *s is now velarized.

Rule 2 is a property of all QB lects except A, B, C--the "peripheral QB dialects" of CQPG-I, and O. In eastern Ancash lect D is identified as [xRule 2b]. We can examine this situation in detail from Table 3 which shows the total corpus of relevant attested morphemes in lects C through I. The data is incomplete only with regard to *masa in C, D, and E (this root was discovered too late to be elicited for those areas). Also included in Table 3 are the effects of Rule 3 which operates

Lects	C	D	E	F-G	H-I
Rule 2b	-	x	+	+	+
*VsV					
*masa- 'spread in sun'	h	h	h	h	h
*masa 'partner'	?	?	?	h	h
*sasa 'difficult'	-	h	h	h	-
*usu- 'waste'	s	h	h	h	h
*kusa- 'roast'	s	Ø	Ø	Ø	Ø
*masi 'companion'	s	h	h	h~Ø	Ø
*qasa 'frost'	s	s	h	h	h
*qusa 'husband'	s	s~h	h	Ø	Ø
*wasi 'nouse'	s	s~h	h	Ø	Ø
*usa 'louse'	s	s~h	h	Ø	s~h
*rasu 'snow'	-	-	-	h	h
*pusaq 'eight'	s	s	s	Ø	Ø
*asi- 'laugh'	s	s	s	s	s
*CsV					
*kawsa- 'live'	Ø	Ø	Ø	Ø	Ø
*rɪqsi- 'be acquainted with'	s	Ø	Ø	Ø	Ø
*kumsa- 'push'	-	ŋh	ŋh	ŋh~mØ	mØ
*kimsa 'three'	ŋs	ŋs	ms~ŋh	ms	mØ

TABLE 3

MORPHEME-INTERNAL *s IN ANCASH

Both h and ɣ indicate a [+Rule 2b] item; Ø also indicates a [+Rule 3] item (2 and 3 are intrinsically ordered).

entirely on the output of 2b to produce a deletion of *h in certain intervocalic environments. Both h and ∅ in the matrix therefore indicate [+Rule 2b] for specific morphemes. For the specific postconsonantal environment only four relevant morphemes are known, and their reflexes show a confusing distribution open to various interpretations that will not be pursued here.[9] For the intervocalic environment, Corongo (C) has one item with //h// , probably due to influence from the Callejón, so Rule 2b is considered absent. Sihuas (D) has three [-Rule 2b] items, five [+Rule 2b] items, and three [xRule 2b] items with [s] and [h] alternating; thus Sihuas is defined as an [xRule 2b] isolect. The remaining lects (E-I) show no more than two [-Rule 2b] items and are considered part of the [+Rule 2b] isolect. *asi- is noteworthy for its resistance to the change; there is one record of a [+Rule 2b] reflex //ayi-// , in Picoy (Q; Creider 1967).

2.03. (3) $*h > \emptyset \, / \, \left\{ \begin{matrix} u \\ a \end{matrix} \right\} \_\_ \left\{ \begin{matrix} a \\ i \end{matrix} \right\}$

$$\begin{bmatrix} -\text{Son} \\ +\text{Cont} \\ +\text{Grv} \\ -\text{Ant} \end{bmatrix} > \emptyset \, / \begin{bmatrix} +\text{Grv} \\ -\alpha\text{Hi} \end{bmatrix} \_\_ \begin{bmatrix} -\text{Rnd} \\ \alpha\text{Hi} \end{bmatrix}$$

The exact nature of this change is not clear since, as Table 3 shows, only five of the nine possible intervocalic environments are represented in the data. It is interesting to speculate as to how Rule 3 might be revised if some of the missing environments are later recorded. It is not surprising that a_a,

u_u, and a_u do not allow the loss of *n, since this would result in adjacent vowels in combinations not generally permitted in Quechua--combinations that could not be interpreted as containing an intervening //w// or //y//. u_a and u_i are not thus constrained, though in the latter case the resulting sequences [ai]~[ayi] are not found in other forms of Quechua (I know of one very minor exception: a single lexeme //čankay// 'crotch' in Ayacucho, somehow derived from //čanka// 'leg'). Among the unrecorded possibilities it is reasonable to predict that u_i, i_a, and i_u would allow the loss of *n. The case of i_i is more problematic since it might pattern either with a_i and u_u or with a_i.[10]

Rule 3 is intrinsically ordered after 2b, and the [+Rule 3] isolect is coterminous with isolect [+Rule 2b] except that it does not include Sihuas (D) and Pomabamba (E). Table 3 shows that in D-E only *kusa- undergoes the change, while in F-I the only stems which unexpectedly resist the change are *masi in F-G and *usa in H-I.

2.04a. (4a) *ñ > n

The depalatalization of *ñ is a simple unmarking change ([M Anterior]>[U Anterior] /[$\overline{\text{M Nasal}}$]) found in probably all but the lect of Baños-Rondos (N) and the peripheral lects (A-C). The number of relevant morphemes recorded is small because *ñ is a low-frequency segment, and this low frequency is only in small part due to the fact that *ñ occurs only word initially.

(In the lexically well-studied QA lect of Ayacucho just twenty-five stems are found with word-initial //ñ// , and this is less than half the number that begin with the other palatal sonorant //ɪ//. These data are from Parker 1969$_e$.)

In the relatively well-attested QB area of Ancash four adjacent provinces are marked as [xRule 4a] in Table 1. The mid value in this case means not that the rule is present as a variable rule (virtually no variation [ñ~n] has been observed), but that it has affected only part of the lexicon. The actual distribution of morphemes reflecting *ñ in Ancash is interesting. In Table 4 the lects are entered on the horizontal axis in the order of increasing applicability of Rule 4a, from [-Rule 4a] lect C, through the [xRule 4a] lects, to [+Rule 4a] lects H-I.

The top two items *ñi- and *ñuqa should perhaps be excluded from the present analysis on the basis of the peculiar distributions of their reflex ñ- and n-forms throughout Quechua. n-forms are found in several lects of QA, e.g. Cuzco, where no depalatalization is otherwise attested; thus if such variants were also present in early QB they would not be relevant to 4a.

Except for the problem posed by *ñi- and *ñuqa, Table 4 seems to indicate that the change began in the environment of a morpheme boundary. That a change should begin in suffixes and then spread to roots is not surprising if we note that two other changes in Quechua are known to have the same con-

	C	D-E	G	F	H-I	Gloss
(*ñi-		+	+	+	+	'say')
(*ñuqa		+	+	+	+	'I')
*-ña		+	+	+	+	'already'
*-ñaq		+	+	+	+	Quotative Past
*ñaqča			+	+	+	'comb'
*puñu-				+	+	'sleep'
*wañu-				+	+	'die'
*añas					+	'skunk'
*ñaka-					+	'suffer'
*ñawi					+	'eye'
*ñaña					+	'woman's sister'
*wiña-					+	'grow'
*ñawpa					+	'before'
*ñiti-					+	'crush'
*ñatin					x	'liver'
*maña-						'ask for'
*piña						'angry'
*ñupu-~ñipu-						'dent'
.						
.						
.						
?						

TABLE 4

THE DEPALATALIZATION OF *ñ (Rule 4a) IN ANCASH

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straint: (1) *uy > ī in parts of Ancash, see 2.08 below; and (2) final *p > x̣ in Cuzco-Bolivian, see CQPG-IV:186. It must be stressed at this point that I am not suggesting that 4a began in Sihuas-Pomabamba (D-E). While it is generally recognized that a rule may generalize in the course of spreading geographically (for a recent discussion see King 1969:90-2), it has also been recently demonstrated that the form of a rule found farthest from the point of origin can logically be expected to show the original environment of the change. Detailed studies of sound changes in progress have shown that changes begin in highly specific environments, i.e. environments having a relatively large number of constraining features, and generalize by losing these features in such a way that the generality of the rule is proportionate to the amount of time it has been present in any given locale. For the most recent and elaborate theoretical presentation of these space-time relationships see Bailey 1970. It is clearly this model of linguistic change that must be used in interpreting Rule 4 and the general situation in Ancash east of the Cordillera Blanca. For while our present knowledge of Quechua is not sufficiently detailed to allow analysis of the sorts that William Labov, C.-J. Bailey, Derek Bickerton, and others have carried out for various forms of English, the data in Tables 1, 3, and 4 leave no doubt that Rules 2b, 3, and 4a must be interpreted as petering out as we look northward in eastern Ancash. Lects D-E are the most recent locales to undergo

these changes, and closer observation can be expected to reveal that the changes are still in progress there.

Table 4 shows that Antonio Raimondi (F) has a larger number of roots restructured by Rule 4a than does Huari (G), though this is the converse of what we might expect since Huari is farther south and therefore presumably closer to the origin of the change. The reason for this situation becomes apparent when we compare the distribution of Rule 8. The monophthongization is a highly local innovation that obviously started in the Huaylas lects (H-J) and is now spreading into C and F. Due to some non-linguistic factors not yet identified, the province of Antonio Raimondi, which was part of the province of "Huari" till 1962, seems to be the point of entry in eastern Ancash for changes spreading from the Callejón.

As we might expect, the depalatalization of *ñ leaves some leaves some unexplained exceptions in lects marked [+Rule 4a]. Three frequent stems, *mañа- 'to ask for', *piña 'angry; to become angry', and *ñupu-~*ñipu- 'to dent' are widely recorded with an invariable //ñ//, and one [xRule 4a] item *ñatin 'liver' is known. The sizeable lexicon now available for Huaylas (H-I) and Antonio Raimondi (F) shows a very few other lexemes with //ñ//, and their etymologies are unclear.

2.04b. (4b) *ɪ > i

The depalatalization of *ɪ covers roughly the southern two

thirds of the area that shows depalatalization of *ɲ. The northern half of Junín and all of Pasco and northeastern Lima are affected, but in Ancash the change has reached only the province of Bolognesi (K), and in Huánuco it covers a narrow area along the Marañón River as far north as the province of Huamalíes. Regarding the northernmost limit, my own scant data for Huamalíes agree with Torero's (1964:456-8) isoglosses: Llata (L) is affected, but the change does not reach the district of Arancay (M). It would be interesting to have detailed data from the several small districts between Llata and Arancay.

Yanacocha (P) is marked [xRule 4b] on the basis of Escobar's (1967) examples which show six *ɪ-items with //ɪ// and eleven with //l//.

Change 4b is obviously a generalization of the earlier depalatalization of *ɲ. Since *ɲ and *ɪ constitute the class of palatal sonorants, lects K, L, and P through T must be treated as exhibiting the general rule

(4) [M Ant] > [U Ant] /[$\overline{\text{M Son}}$]

which does not have to refer to the features [Nasal] and [Lateral].

2.05. (5) *č > c

$$\begin{bmatrix} \text{U Cont} \\ \text{U Grv} \\ \text{M Ant} \\ \text{U DelRel} \end{bmatrix} > \begin{bmatrix} \text{U Ant} \\ \text{M DelRel} \end{bmatrix}$$

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The fronting of an alveopalatal affricate to an alveolar one has been observed in various languages and presumably constitutes a grammar simplification of the unmarking type, but there are problems in formulating the rule to show this simplification. The present formulation is not entirely accurate since it describes the change in syllable-initial environment only. *č is much less frequent preconsonantally, and there, where it is [M Continuant], the change marks the segment for [Anterior] as well as for [Delayed Release] according to the conventions proposed in Parker 1970. Since the complete formulation of Rule 5, which must use alpha-type variables ranging over M and U, obviously introduces grammar complication in syllable-final position, we can suspect that the change began prevocalically and then became unconditioned--i.e. it underwent rule generalization. Let us assume, then, that the rule written above describes a historical event. In order for this change to be considered as decreasing complexity we must use the notion of feature hierarchy: if [Anterior] is higher or "heavier" than [Delayed Release], the added M for the latter does not neutralize the deletion of M for the former. For some preliminary exploration of these concepts, see Bailey and Parker 1970 and Bailey 1971.

The depalatalization of *č might at first glance appear to be related to the depalatalizations described by Rule 4, and especially to the initial stage 4a with which it shows a considerable geographic overlap. But upon closer inspection we see that 5 could not be a generalization of 4a since the [+Rule 5]

isolect is not included within the [+Rule 4a] isolect: 4a and 5 must have had independent origins.[11] This is not to say that 4 and 5 are in no way related, but only that current theory offers no way of expressing a relationship between them.[12]

Rule 5 occupies roughly the northern half of the QB region, avoiding the peripheral Chupaychu lect (B) and reaching southward to include Yanacocha (P) and Picoy (Q). No cases of [xRule 5] have been observed.

2.06. (6) *č̣ > č

There can be no doubt that Rule 6 must describe an unmarking change, but the retroflexed palatal type of obstruent is never mentioned in the literature on feature systems and the best known systems (Jakobson, Fant, and Halle 1952; Chomsky and Halle 1968) offer no way of distinguishing such a segment. I therefore agree with McCawley's suggestion (see Harms 1968:33) of using a feature [Retracted Articulator].

The fronting of *č̣ affects most of the [+Rule 5] lects, all except C and P-R, and also reaches lects B and N. Since B and N are [-Rule 5, +Rule 6], they now contain a single affricate //č//. Lect N, of the districts of Baños and Rondos in western Huánuco, seems to be a relic area that has resisted the depalatalizations (4-5) but accepts the fronting of *č̣. Chupaychu (B) in eastern Huánuco, on the other hand, is a much larger area that had not shared in any other QB innovation

since 2a. In view of the overall linguistic and geographic situation of Chupaychu, my interpretation is that the fronting of *ȼ̣ had two independent origins such that this lect is not treated as sharing in an identical change affecting lects D-N. In fact, the fronting of *ȼ̣ has had more than two independent origins, as most QA lects bear witness. We must even suspect a causal relationship between the change in Chupaychu and the one in Southern QA, because it is known that a large part of the Chupaychu area was settled by mitmaq from Cuzco.

If my proposal is accepted, we must now ask whether in lects D-N rules 5 and 6 are not really substages of a single change. They show the required spacial relationship (but only if the dual-origin hypothesis for 6 is accepted, see fn. 11), and they can be described as a single process--"fronting of the affricates". But current theory does not allow us to treat 5 and 6 as one rule because *ȼ and *ȼ̣ share no feature which unmarks in both segments. 5 and 6 can only be treated as related in terms of system-internal tendencies such as those postulated by Martinet (1955).

Lects P-R are [+Rule 5, -Rule 6], which indicates a system with two affricates //c ȼ̣// (where the retroflexion of the latter could not be stated as a neutralization; a markedness-switching rule or "M-valued neutralization" would be required). In fact, the work of Escobar (1967) and Creider (1967) shows that these lects have a three-affricate system //c ȼ ȼ̣// which contains not only the predicted affricates but also the more normal--i.e.

less-marked--affricate [č] . We need not consider these lects as evidence of a third affricate position in the proto-language if there is reason to treat //č// in these lects as due to lexical borrowing from the [+Rule 5, +Rule 6] and/or [-Rule 5, -Rule 6] lects. Such an explanation is almost inevitable since //c č// in [+Rule 5, +Rule 6] lects (D-M) correspond quite regularly with //č ç// respectively in [-Rule 5, -Rule 6] lects (S-T, A), and this observation is not compatible with a notion that Yanacocha and Picoy (P-Q) preserve the oldest system with regard to affricates.[13] A comparison of the morphemes containing affricates in Escobar's and Creider's examples with their cognates in the other lects gives strong support to the hypothesis that //č// in P-Q is due to borrowing. //č// is of considerably lower lexical frequency: Escobar's examples show nine morphemes with //č//, twenty-one with //c//, and twenty-three with //ç//; Creider's unpublished Picoy vocabulary shows twenty-eight morphemes with //č//, fourty-one with //c//, and fourty-eight with //ç//. But more important, //č// alone is not found in regular correspondence with segments in the other lects. Only seven cases of Picoy //č// correspond with //č// in both Huaylas (H-I) and Huanca (A), and several of these cognate sets are easily explainable as irregular due to onomatopoeia or borrowing. In no case does Picoy //č// correspond to Huaylas //c// and Huanca //ç//.[14]

Corongo (C) is also [+Rule 5, -Rule 6] and also has //č//, but in this case the corpus is too small to allow examination

of the lexical distribution of the three affricates. //č// appears to be of very low frequency. In view of the different histories of areas C and P-R, we can predict that there will be no clear-cut č:č correspondence between them. Even between Yanacocha and Picoy this correspondence is probably quite weak; among the morphemes attested for both areas we find eighteen with affricates of which only two involve a //č// and both are in a correspondence Picoy //č// : Yanacocha //c̣// < PQB *c̣.

2.07. (7) *c > s

$$\begin{bmatrix} U\ Cont \\ U\ Grv \\ U\ Ant \\ M\ DelRel \end{bmatrix} > \begin{bmatrix} W\ Cont \\ U\ DelRel \end{bmatrix}$$

The formulation of this rule, like that of Rule 5, accounts only for the syllable-initial position. In the much less important syllable-final position the change is simply an unmarking for both [Continuant] and [Delayed Release]. Initially, on the other hand, there is some question as to the nature of the change. The spirantization of prevocalic stops is not an uncommon type of change (the first stage of Grimm's Law is probably the best known example), but according to the marking conventions spirants are less expected than stops in this environment. Rather than treat Rule 7 as a marking change, or try to explain it as an overall grammar simplification on the basis that [Delayed Release] is higher than [Continuant] in the feature hierarchy (this seems to be incompatible with decisions already made with regard to

Rule 5), I interpret the change as an assimilation to the [U=+Continuant] value of the following vowel. The need to handle assimilation as a process distinct from both unmarking and marking processes has been developed by Schachter 1969 (see also Parker 1970:170-1), and the rationale for the W=-1 value of the assimilated feature is the main topic of Parker and Bailey 1970.

The spirantization of *c is intrinsically ordered after Rule 5 since 5 is the sole source of *c. Torero (1964:449-50) reports this change for three non-adjacent areas: (1) the province of Huamalíes, Huánuco (L-M); (2) the provinces of Bolognesi, Ancash, and Cajatambo, Lima, and the district of Ambar, province of Chancay, Lima (K); and (3) "el valle alto del Río Chancay, provincia de Canta". This last area is not identified in Table 1 because Torero considers it to be a form of QA (his "Pacaraos" dialect; 1964:473), though I am skeptical of his interpretation (see Parker 1969_d:191-2).

According to Torero's isoglosses the district of Oyón, province of Cajatambo, Lima, constitutes a lect [+Rule 5, -Rule 6, +Rule 7], i.e. a lect with a single affricate //č//. Creider (1967:52) reports this situation for the town of Huacho Sin Pescado, district of Pachangara (immediately south-east of Oyón), Cajatambo, though he also reports a second affricate //č// which we can assume to be due to borrowing as in the neighboring lects of Picoy and Yanacocha. Oyón probably has //č// also; Torero does not specifically mention it

for any of the [+Rule 5, -Rule 6] lects, presumably because it does not appear to derive from any single PQB segment. These areas of Cajatambo, then, constitute the lect identified as R.

2.08. Rule 8, viewed as a single general innovation, describes the monophthongization of tautosyllabic vowel-plus-glide diphthongs. This rule, unlike rules 1-7, remains in the language as a synchronic phonological (morphophonemic) rule since it operates across boundaries as well as within morphemes. The effect of the rule is

(a) //ay// → [ē]

(b) {//uy// / // iy//} → [ī]

(c) //aw// → [ō]

As I have pointed out in a previous paper (Parker 1970:157-9), a pair of ordered rules are actually involved: there is a probably pan-Quechua assimilation rule that describes

(a) //ay// → /æy/

(b) //uy// → /üy/

(c) // aw// → /ɔw/[15]

and which is ordered before the monophthongization rule that accounts for most of the long vowels in five of the lects of Ancash. Assuming the operation of this assimilation rule,

Rule 8 may be formalized as

$$(8)\quad \begin{bmatrix} \underline{U}\ \text{Syl} \\ \alpha\ \text{Grv} \\ \underline{\beta}\ \text{Hi} \end{bmatrix} \begin{bmatrix} \underline{M}\ \text{Syl} \\ \underline{M}\ \text{Cons} \\ \underline{\alpha}\ \text{Grv} \end{bmatrix} \Rightarrow \begin{bmatrix} \underline{U}\ \text{Syl} \\ \alpha\ \text{Grv} \\ \beta\ \text{Hi} \\ \underline{M}\ \text{Long} \end{bmatrix} / \_\_\_[-\text{Syl}]$$

This formulation of Rule 8, however, ignores certain constraints on the monophthongization of /üy/ and /ɔw/. These constraints, very different for each diphthong, are impossible to build in to a single rule formulation with the available conventions. /üy/ is monophthongized only when a morpheme boundary is adjacent to the /y/, and /ɔw/ is monophthongized only when preceded by a palatal consonant and followed by //p// or word boundary (except that in the generalized rule 8c´ where the monophthongization of /ɔw/ is constrained the same as that of /æy/).

Rule 8 apparently began in the Callejón de Huaylas (H-I) and has since spread southwest to Aija (J), north to Corongo (C), and east to Antonio Raimondi (F). 8a and b are extremely active processes since they operate across morpheme and internal word boundaries and thus affect all sequences of morpheme-final vowel plus suffix-initial //y// which is syllable-final. 8a is presumed to have the original environment because it has spread farthest, as explained below. 8c has relatively little application because //w// does not begin suffixes except when it is followed by a vowel; thus 8c applies only to root-internal /ɔw/--a very low frequency sequence. It is

primarily the frequency criterion that leads me to treat 8c as later than 8a and b; if we hypothesize solely on the basis of our knowledge of the rule generalization process it is equiprobable that the monophthongization of //aw// immediately followed that of //ay// .

8a and 8b differ in two respects. (1) 8b 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 //uy// in //huytu// 'oblong', //luycu// 'deer', //puyñu// (a type of pot), //puywan// 'heart (of large animal)', //quyru// 'star', //ruyru// 'round', //ruywaq// 'Yellow Grosbeak', //šuyšu-// 'to strain, sift', //uyɽu// (a type of pot).[16] (2) 8a has spread farther than 8b in the [xRule 8] lect which I have greatest knowledge of--the province of Antonio Raimondi (F). Recent fieldwork in the capital of Llamellín showed that //ay uy// are both monophthongized there with extremely high frequency, and no constraints could be discovered to explain the occasional occurrences of phonetic diphthongs. But a rather different situation was observed in the speech of an informant from Aczo, the southernmost district of Antonio Raimondi (contiguous with the province of Huari). This informant was a young woman, then residing in Lima, who displayed an unusual sensitivity to linguistic variables. This sensitivity can be partially explained from her personal history: her mother was a native of Aczo, and her father a native of Huari; she grew up in Aczo, but attended high school in Huari. During

our first informant session I asked her impression of linguistic differences between the provinces of Antonio Raimondi and Huari. She offered the information that pronunciations [æy] and [ɔw] were used in Huari where [ē] and [ō] were used in Aczo, and that [ī] was a substandard pronunciation of [ɨ̈y]. In other words, she identified her lect as [+8a, -8b, +8c]. Her actual performance showed not these categorical constraints but rather variable ones with 8a (and perhaps 8c--//aw// was too infrequent to be observed well) running well ahead of 8b. After our discussion of the matter she attempted to improve her consistency in producing [ē] and [ɨ̈y], and at one point she stopped in the middle of a sentence in a folktale to correct a rare [æy] to [ē]. Whatever the exact status of Rule 8 in Aczo would turn out to be upon closer study, this informant's behavior clearly shows that 8a has proceeded ahead of 8b.

For the other [xRule 8] lect, Corongo (C), the small corpus does not reveal differential variability of 8a and b. It is clear, however, that for my informant the application of the rule is normal even though greater prestige is attached to the diphthongs. After he had used the root //supay// 'devil' in several contexts with variable [æy~ē], I asked his opinion of the variation; he stated that the diphthong is preferred, and proceeded to illustrate with the sentence [táx̣e súpay kéč̣o kékaŋ] (// taqay supay kayč̣aw kaykan//) where he highlighted the diphthong in //supay// while being quite unaware

that he had monophthongized an //ay// in each of the other words.[17]

Rule 8c has been difficult to observe because //aw// does not occur acros boundaries and is thus of very low frequency. In its highly constrained form the monophthongization seems to require a preceding palatal consonant and a following //p// or word boundary. This is a peculiar environment (or pair of environments) but it accurately accounts for the [+Rule 8c] forms recorded in Huaylas (H-I): [-čō] 'in, on', [čópi] 'center', [wéčō] 'Mountain Ground Tyrant', [yō] 'hey!', [nópa] 'before' (< *ñawpa, with 4a following 8c), and [wáɾō] 'scarecrow' (this morpheme has not yet been found outside lect H, so the proposed etymon *waɾaw awaits verification). More recent fieldwork in Llamellín (F) turned up all but the last of these same forms, plus [púyō] (an unidentified bush) and [píñō] (a plant used as fodder for pigs).

The small corpuses for Aija (J) and Corongo (C) suggest a generalized Rule 8c´ with the same environment as 8a, as attested by Aija [ómi] 'yes', [hóya] 'pillow', and Corongo [óxe] 'man's brother', [ókiš] 'old man'.

2.09. (9) *q > ɣ /__V

$$\begin{bmatrix} \text{U Cont} \\ \text{M Grv} \\ \text{M Ant} \\ \text{M Hi} \end{bmatrix} > \begin{bmatrix} \text{W Cont} \\ \text{W Voic} \end{bmatrix} / \_\_ [+\text{Syl}]$$

PQ *q is the most highly marked of the simple stops in Quechua (the affricate *č is about equally complex), so it is not sur-

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prising that all lects have subjected *q to some degree of unmarking and/or assimilation. The most widespread change is the spirantization of *q > x̣ syllable-finally, an unmarking change for the feature [Continuant]. To my knowledge, final [q] is found only in parts of Huancavelica (QA) and in the Callejón de Huaylas (QB lects H-I), and even in these areas the spirantization rule is present as a variable rule. Syllable-initial *q remains [q] in these areas and in a few others (e.g. Cuzco), but in most it has been changed. In some lects it has even been lost as a contrastive segment: in Ecuador, Colombia, and parts of northern Peru (all QA) it has merged with reflexes of *k; and in Huanca (QB lect A, see Rule 14 below) it has been deleted in one environment, changed to [ʔ] in another, and changed to length of a preceding vowel in yet another.[18]

Rule 9 describes the spirantization and voicing--both apparently assimilations--of initial *q in lects B, F-G, and K-S. This change is nearly identical to one that has occurred independently in Bolivian (QA). The [+Rule 9] isolect coincides somewhat with the [+Rule 4b] one, but extends farther in Huánuco and eastern Ancash. The present description represents a synthesis of my own observations with those of Torero, Creider, and Escobar, and will certainly have to be modified after more careful investigation has been carried out. My data suggest that Rule 9 is a variable rule in many areas, and that the spirantization and voicing are to some

extent independent. Spirantization of prevocalic *q without voicing is found in lect C; see Rule 13 below. Voicing without spirantization was noted as regular, but not categorical, in my very small corpus for Ambo, in the lect B area, though according to Torero Ambo is within the area that shows a "uvular vibrante simple, habitualmente sorda, pero sonorizable en posición intervocálica" (1964:452). My first informants from Huaraz, in the lect I area, members of one family, regularly used [ɣ̣] but subsequent work with various persons from that city turned up only [q̣]. Discrepancies such as these point to a highly complex situation that should be studied in great detail.

2.10. (10) $*h > \emptyset \; / \; \#\_\_\_$

The loss of word-initial *h is found in Northern Huaylas (H) and Corongo (C), and it is one of a set of rules--5, 8, 10, 11--which in view of the overall picture summarized in Table 1 seems to have spread to Corongo from Northern Huaylas. Rule 10 is also one of the two rules (10, 11) that distinguish Northern Huaylas from Southern Huaylas (I).

2.11. (11) $\left\{\begin{matrix} i \\ u \end{matrix}\right\}\!: > \left\{\begin{matrix} e \\ o \end{matrix}\right\}\!:$ /[First Person]

First person (except inclusive plural) in QB is marked by lengthening of the final vowel of a noun or verb stem. When followed by an external word boundary these long vowels are often accented, and they are immune to the shortening rule mentioned in fn. 17. Rule 11 describes the lowering of high vowels marked

for first person to the mid position. The nature of this change is not understood at present, but it seems to be an expected phenomenon in Quechua since it has had at least three independent origins; Rule 11 is found in (1) Northern Huaylas and adjacent Corongo (H, C), (2) Picoy (Q), and (3) Arancay (M).

2.12. (12) *aq ⇒ ā /[-Seg]C___#

In four of the five suffixes that have the general shape *-Caq, *q is replaced by lengthening of the preceding *a in Antonio Raimondi and Huari (F-G). Affected are the clitics *-raq 'still' and *-taq 'then', the Quotative tense suffix *-naq (PQB *-ñaq), and the Dative case suffix *-paq. The case suffix *-yaq 'until' is exceptional. The [+Rule 12] isolect was a political entity till 1962 when the province of Antonio Raimondi was created out of what had been the three northernmost districts of the province of Huari.

A similar change in Huanca (A) is discussed in 2.14 below.

2.13. (13) *q > ẋ /__V

The spirantization of syllable-initial *q might be described either as an assimilation to the [+Continuant] value of the following vowel or as a generalization of an earlier unmarking rule that spirantizes *q syllable-finally; cf. the discussion in section 2.09. Synchronically, the [+Rule 13] lects

have an unconditioned rule *q > x. The change has occurred independently in the QB lects of Corongo (C) and Tarma (T), and in the QA lect of Ayacucho.

2.14. (14) *q > ʔ

Rule 14 as here stated describes a hypothetical change that I consider the logical predecesor of later changes that account for the present reflexes of PQB *q in Huanca (A). In Huanca *q has been lost from the inventory of systematic phonemes, and we find the following reflexes at the level of systematic phonetic representations: (R1) ∅ (zero reflex) immediately before and after external word boundary; (R2) lengthening of a preceding vowel when followed by a consonant, regardless of whether a morpheme boundary or internal word boundary precedes that consonant; and (R3) glottal stop when preceded by any segment and followed by a vowel. To illustrate:

	Proto-QB	Huanca	Gloss
(R1)	*qara	[ala]	'skin, bark'
	*yuraq	[yula]	'white'
	*puɲuq	[puɲu]	'sleeper'
(R2)	*puɲuqpa	[puɲūpa]	'of the sleeper'
	*wiqti	[wīti]	'a secretion of the eyes'
(R3)	*paqa-	[paʔa-]	'to wash'
	*sinqa	[sinʔa]	'nose'

It is obvious that R1-3 do not simply correspond to three dis-

tinct phonological changes. At the systematic phonemic level 'sleeper' must be //puñū// where the vowel length represents the agentive nominalizer *-q, and the lect has added a phonological rule that shortens long vowels before external word boundary. (This rule does not affect the long vowel of //puñū// 'I sleep', as noted above in 2.11.) In a root such as [wïti] there is no alternation, so we can posit underlying //wïti// . Some linguists will no doubt prefer a more abstract //wi?ti//; there would be no point to arguing the serious problem of abstractness of synchronic phonological representations in the present study, but I do feel that *wi?ti is a logical intermediate stage between the PQB and present-day situations. We can likewise reconstruct intermediate *puñu? and *?ala (or *?ara). Now we have a fairly simple accounting for the facts of modern Huanca in terms of three ordered historical innovations: first Rule 14 converts all *q to *?; then a rule is added that converts *? to vowel length in syllable-final position; and finally a rule is added that shortens long vowels before external word boundary. In the case of the word-initial "zero reflex" there is no need to posit the addition of a deletion rule at all because there is no reason to suppose a stage in which there was an underlying initial //?//. As soon as Rule 14 changed in status from a variable to a categorical rule so that the speakers no longer heard sporadic instances of word-initial [q], they could have simply interpreted the [?] as the output of a different, low-level rule

which in Quechua (as in English and many other languages) produces a sporadic [ʔ] before any word-initial vowel.

The data underlying the present analysis has been supplied by Rodolfo Cerrón (in his published studies and in personal communication), a native of Chongos Bajo near Huancayo. These data show two reflexes of *q that were not mentioned above because they are due to lexical borrowing. In one case the source must be the neighboring QA lect of Ayacucho, as spoken in the department of Huancavelica, and in the other case it must be a small area in the center of the Huanca area (north of Huancayo and Chongos Bajo). The second case is especially interesting because it shows that "Huanca" is in fact not a single lect as suggested in Table 1.

Morphemes with //k// reflecting PQB *q in Cerrón's lect must be borrowings from the Ayacucho lect of QA. The most telling example is the stem //ñuka// 'native of Huancavelica' which is a reflex of *ñuqa 'I'. A unique characteristic of Huanca is the special first person singular pronoun //yaʔa// which points to an earlier *yaqa of unknown origin, so apparently the people of southern Junín have taken the "funny" pronoun of their QA-speaking neighbors and used it as a noun referring to the people who use that pronoun. Other examples of Huanca //k// reflecting *q are: //irki// 'dwarf', //karačupa// 'possum', //kiswar// (a tree), //makta// 'boy (deprecatory)', and //wawki// 'man's brother'. Three of these examples show additional evidence of their loanword status--they contain //r// (cf. Rule 15).

Many morphemes show a zero reflex of *q where glottal stop is expected; e.g. //au-// <*qaqu- 'to rub', //tua-// <*tuqa- 'to spit', //pila// <*pirqa 'wall', //isun// <*isqun 'nine', //p'ca// <*pičqa 'five', //pišu// <*pišqu 'bird'. It should be added that the "Junín" entries in the Vocabulario Políglota Incaico (Misioneros...1905), identified only as compiled in the province of Huancayo, show a higher incidence of the glottal reflex (e.g. Ha-huy 'to rub', Pilha 'wall') than do Cerrón's examples. Until móre reliable lexicon is available for the province of Huancayo we will not be able to determine the exact status of this q-deletion rule, but Torero (1964:452) has reported that its point of origin is in the province of Concepción. He states that *q "en la provincia de Concepción y al noroeste de la provincia de Huancayo (Junín) ha desaparecido en todas las posiciones, arrastrando a su suerte a /n/ cuando la precedía (*/sinqa/>/sia/ "nariz", */mikunqa/> /mikua/ "comerá"...".

The fate of *q in Huanca is even more complex than the foregoing paragraphs indicate. In Jauja, the northernmost of the three provinces occupied by the descendents of the Huancas, *q seems to have merged with *h: "en la provincia de Jauja (Junín) se realiza como velar fricativa o glotal aspirada, confundida con la articulación dada localmente a */h/" (Torero 1964:452). Since Jauja is [-Rule 14], it is of course immune to the other four changes we have examined above for the provinces of Huancayo and Concepción.

It is now clear that "Huanca" is not a single lect; there are at least three lects in the Department of Junín, and undoubtedly more in the province of Yauyos, Lima. In Yauyos, Torero indicates that no change has affected *q in Alis, but he does not report on the other QB-speaking districts (Lincha is QA). Perhaps my reluctance to incorporate Torero's findings into the scheme presented in Table 1 without corroborating evidence is unwarranted in the present case, but the situation as regards *q in southern Junín and Lima is clearly much more complicated than his survey work has revealed.

We can now turn to an innovation that characterizes the entire Huanca region.

2.15. (15) *r > l

The lateralization of *r clearly dates from the period of Huanca political unity. Santo Tomás (1560) can only be referring to Huanca when in the first chapter of the Gramática he states: "vnos dizẽ (póri) que ſignifica andar:y otros en otras prouincias dizen (póli) en la miſma ſignificación" (18). Furthermore, the name Lima < *rimaq 'speaker' seems only to be interpretable as the Huanca form of the name of the Rimac River after which the city was named.

A systematic phoneme //r// is present in Huanca, but it is of very low lexical frequency and can be attributed to borrowing. Several examples from Cerrón's data were given in section 2.14, along with other evidence of borrowing from Huancavelica.

Whether or not [+Rule 15] really defines the entire Huanca region will depend on how the term "Huanca" applies in the province of Yauyos, Lima. The question is a very complicated one because Yauyos is perhaps the most linguistically complex province in highland Peru and it is known only from Torero's research. In addition to the QB-speaking communities, Yauyos contains two QA lects (Lincha and Laraos, apparently relics of the kind of Quechua that was once widespread on the coast and the western slope of the Andes; see CQPG-IV:191-2), and Jaqaru-Kawki (a very conservative relative of Aymara). Torero reports the lateralization of *r in Yauyos only from "un área en torno de las localidades de Cacra y Hongos" (1964: 456).

2.16. (16) $\left\{\begin{matrix}p\\k\end{matrix}\right\} > \left\{\begin{matrix}b\\g\end{matrix}\right\}$ /X__V

$$\begin{bmatrix}-\text{Syl}\\ \text{U Cont}\\ \text{M Grv}\\ \text{U High}\end{bmatrix} > [\text{W Voic}]/\begin{bmatrix}+\text{Seg}\\ \text{U Nas}\end{bmatrix}\text{\_\_}[\text{U Syl}]$$

I.e. Syllable-initial grave stops assimilate to the voicing of the following vowel when preceded by a vowel or a non-nasal consonant. Creider (1968) provides the only report of this change, and it is very well documented in his examples. Unfortunately, it was beyond the scope of his project to document the geographic extent of the change; his data is from the town of Tarmatambo which he does not identify by district, and the

information available to me only shows that Tarmatambo must be either in the district of Tarma or in that of Huaricolca. Torero does not mention the change at all, so we cannot be sure whether the entire province of Tarma is [+Rule 16].

The specification [U High] in the input would be unnecesary if there were reason to consider Rule 16 as more recent than Rule 13. The [U Nasal] constraint is a peculiar one, since post-consonantally we would expect such a change to be favored rather than inhibited by a preceding nasal (in most of northern Peru and Ecuador obstruents are voiced only after a nasal). Rule 16 remains in lect T as a synchronic morphophonemic rule since it produces alternation in suffix-initial stops. A small number of [-Rule 16] morphemes appear in the data, mostly involving intervocalic [x], and a unique case of word-initial voicing is found in //ga-// <*ka- 'to be'.

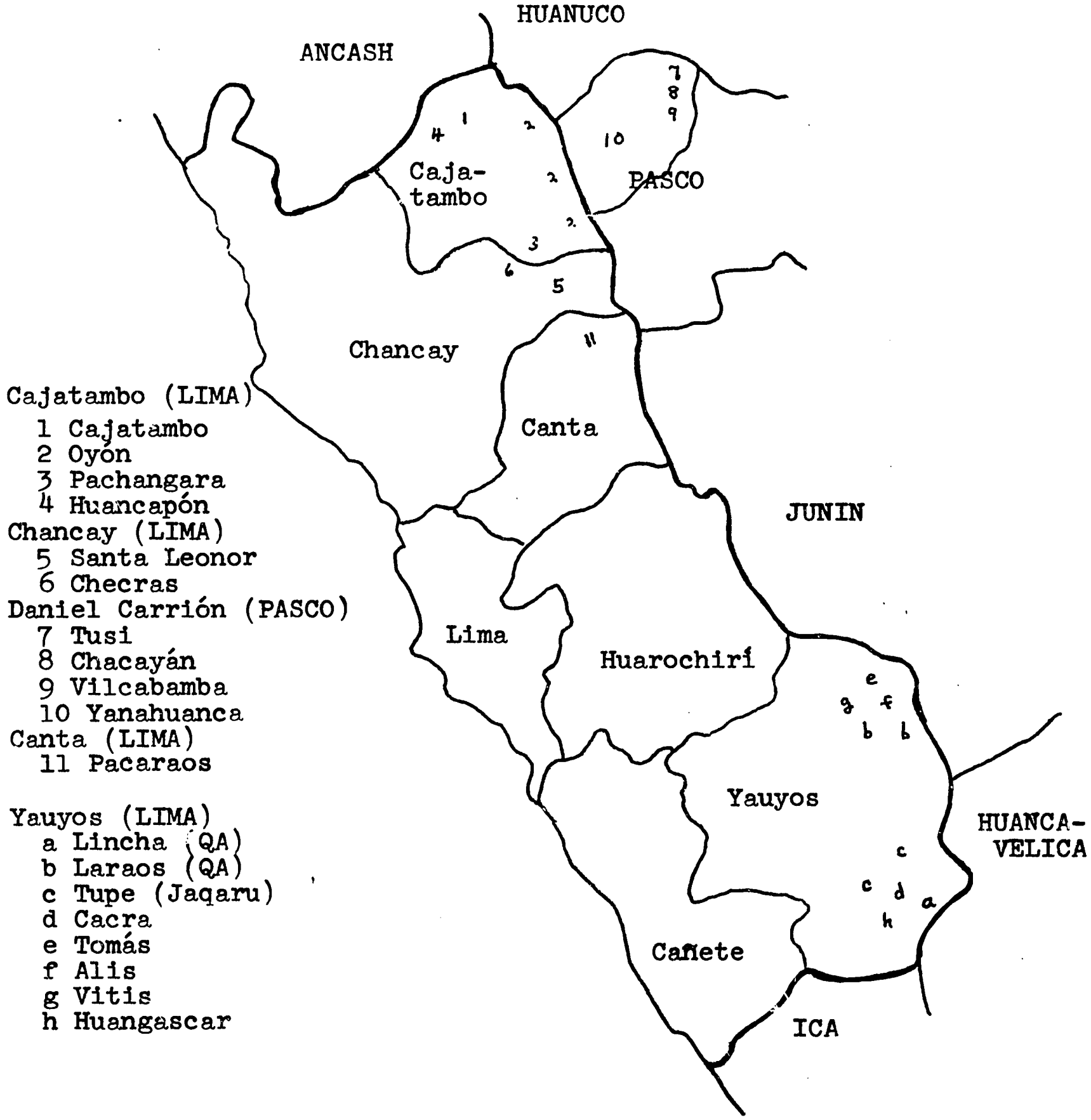
2.17. In this final section on phonological innovations, brief mention will be given to six changes that were not treated in 2.01-16. Those innovations other than rules 1-16 that have already been discussed are not discussed further here (see 2.08, 2.09, 2.14, fn. 9, fn. 17).

2.171. Palatalization of *k. Torero (1964) and Creider (1967) both report the palatalization of *k for parts of the provinces of Cajatambo and Chancay. Lima, and Torero also reports it for several districts of the province of Daniel Carrión, Pasco, but they differ as to the output, environment, and geographic extent

of the rule. Torero reports *k > č /{i/y}__ in Oyón and Huancapón (Cajatambo), Santa Leonor (Chancay), and Chacayán, Vilcabamba, and Tusi (Daniel Carrión). After adding that this affricate has been fronted to [c] (see Rule 5 in Huancapón, however, he obscures the picture by stating that "En varios distritos de estas provincias el proceso se ha detenido simplemente en la realización de una variante palatalizada de /k/ tras /i/ o /y/" (452). We are not told where the reflex [k^{y}] is found, so granting the sequence of events *k > k^{y} > č (an assimilation followed by an unmarking) we are not able to exactly locate the isogloss for the first stage of the changes in question.

Creider's data from Picoy (Santa Leonor, Chancay) show //miču-// <*miku- 'to eat' and //-yča// <*-yka Durative DVV, but only these two morphemes show palatalization; cf. //-nki, -yki, rika-, siki, rikra//. This already shows Torero's report to be questionable. Creider notes that the Durative is [-yk^{y}a] in Canín (Checras, Chancay--outside the isogloss suggested by Torero), but he gives no further information for this area. Finally, he reports [k^{y}~t^{y}] in Huacho Sin Pescado (Pachangara, Cajatambo), and his examples are the Durative suffix and the three forms of the second person suffix. Note that in [wiyánt^{y}i~wiyánk^{y}i] 'you hear' the environment for the palatalization is different from that stated by Torero.

The fact that Creider heard variation between palatalized apical and velar stops in Pachangara suggests to me that



MAP III

Districts of the Departments of Lima and Pasco mentioned in this study

the phone in question is actually a palatal true stop (i.e. non-affricate). This is because his description parallels my own initial reaction to the contrastive non-affricate palatal stop of Jaqaru (when I had never before heard this type of stop). I therefore suggest that future investigators of these lects be prepared to reckon with four stages in the palatalization of *k: velar stop > palatalized velar stop > palatal stop > palatal affricate.

There is still another aspect of this situation that must be considered. Note that the palatalization of *k occurs only in the area that has undergone fronting of *č > c but not fronting of *ǰ > č, i.e. in the area where there is no palatal stop except in loanwords (see 2.06, fourth paragraph). It seems that the palatalization of *k--like the fronting of *ǰ farther north--must be actuated in part by a system-internal tendency to minimize redundant marking. To put this another way, when a sound change affecting one segment restructures that segment and has the automatic side effect of adding an M-valued neutralization to the definition of another segment, a highly unstable situation is created; the system is then highly prone to further innovation by any process or combination of processes (including lexical borrowing) that will have the effect of removing the M-valued neutralization. I believe that the theory of language change must be adjusted to account for this factor that was first investigated by Martinet. Its implications may well prove as far-reaching as have those of two other Prague School concepts--those of the universal feature

system, and markedness.

2.172. *ɪ > ǰ. Torero (1964) reports the obstruentization and delateralization of *ɪ "en un pequeño sector en torno de Mito y Orcotuna, provincia de Concepción (Junín)." (458).

2.173. Reflexes of *r. Every lect of Quechua (except perhaps Huanca which has undergone Rule 15 and now has //r// only in a few loanwords) seems to have a segment //r// with two basic realizations: it is a tap [r] in most environments, but it is a retroflexed spirant [ẓ] before and/or after word boundary. In all lects I have heard, [ẓ] or the devoiced variant [s̱] is produced before an external word boundary. Beyond this, however, the specific environment for the spirant varies considerably from lect to lect, as the following four situations illustrate. In Ayacucho (QA) the spirant is found only before word boundary--internal or external. In Huaylas it is found after external word boundary and before internal and external word boundary. Antonio Raimondi differs from Huaylas in having the spirant before and after external word boundary only; it does not precede internal word boundary. In Picoy the word-final situation is not described by Creider, but word-initially the spirant is found only when no other //r// occurs in the root; thus [ẓánti, ẓéɣi-, ẓúmi] but [ráŋra, ríkra, rúra-]. Details such as these are available for only a few lects at present; in the future Quechuanists must pay greater attention to the phenomenon of the spirant r since the isoglosses may offer new insights into the evolution of Quechua generally. And in view of the striking similarity

between the environments of Quechua [ẓ] and Spanish [r̃] (the trill which generally occurs in the environments where the tap:trill contrast is neutralized), we might expect this study to shed some light on language universals.

2.174. The lowering of high vowels to mid near *q. In all lects of Quechua which preserve the velar:uvular contrast there is a phonological rule that assimilates high vowels to the [M=-High] value of a nearby uvular obstruent. This is an extremely common type of assimilation recorded in languages as diverse as Quechua, Totonac, Quileute, Eskimo, and Hebrew (but it is not universal; Mayan, for example, has velar obstruents that do not affect high vowels). In Parker 1970 (157) I formulated such a rule for Huaylas stating that //i u// are lowered to [e o] resp. when (1) preceding //q//, whether or not there is an intervening sonorant and/or internal word boundary; and (2) immediately following //q//, with the provision that some speakers only apply the rule when the //q// is word-initial. The variable constraint in this rule has not been identified.

Most phonological descriptions of QB lects are very sketchy and set in the autonomous phonemic framework which forces the investigator to ignore many aspects of morpheme structure and to identify [e o] with the contrastive mid vowels in Spanish loanwords. The environment of the vowel-lowering rule is bound to vary somewhat between lects, as the variable in the Huaylas rule indicates, so the phenomenon should be studied

more closely.

2.175. Vowel loss in Comment enclitics. Most Peruvian lects of Quechua have a rule which deletes the vowel of a comment enclitic when the preceding syllable ends in a short vowel; thus [páymi] 'its him' but [nóqam] 'its me'. Since the rule is lacking only in Ecuador, parts of northern Peru, and in some northeastern lects of QB, and since it has the peculiarity of applying only to a small class of morphemes, it is tempting to reconstruct the rule for Proto-Quechua. If this is done, we must then posit a rule loss as an innovation in those areas that do not have the rule. In Antonio Raimondi (lect F) the rule is variable, though no constraint was observed, and in neighboring Llata (L) it is absent. Very little data are available for the lects of Huánuco, and it remains to be seen whether these have the same situation as does Llata.

2.176. Consonant cluster simplification in suffixes. In Quechua generally there is a tendency to simplify suffixes and combinations of the shape -CCV, almost always by dropping the second consonant. The following examples will be familiar to Quechuanists: Bolivian [-sa~-ša]<*-čka Durative DVV; Cuzco [-yU] <*-ykU Augmentative DVV; Ayacucho [-ra~-rqa]<*-rqa Past Definite Tense; Junín (QB lects A, S-T) [-yā]<*-ykā Durative DVV. In Antonio Raimondi (F) the three tense markers *-rqa, *-rqu, and *-šqa all lose *q regularly by a variable rule. One elderly informant in Caraz, northern Huaylas (H) was heard to use [-ru] <*-rqu though other informants in the same town would not recog-

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nize the existence of such a form when asked about it. Changes of this type deserve greater attention than they have received to date.

3. Some grammatical isoglosses in QB. Very little can be said at present about syntactic differentiation in Quechua, and this is especially true of QB. It is possible, however, to note the differential distribution of suffixes to a considerable extent, and the situation is summarized in Table 5.

3.1. *-ku Interrogative. In all lects of Quechua except the QB lects of Ancash and western Huánuco, the Interrogative enclitic *-ku which marks questions requiring a yes-no answer has merged with reflexes of the Negative enclitic *-ču. In CQPG-II I reconstructed a single morpheme "Negative-Interrogative *-ču", but I now believe that reconstruction to be in error.

3.2. *-yā Plural. This suffix appears to have the same distribution as *-ku. It indicates plural subject or object of a verb, and occupies a position in the DVV system immediately after *-Ia and before $\{^{*-mu}_{*-ma}\}$. The vowel length constitutes a problem for reconstruction, as does the vowel length in several other DVV suffixes that have cognate forms in QA with no indication of why length should have developed in QB. Since PQB *-yā is not matched by a suffix **-ya in QA, it could represent PQ **-yaya with Rule 1 applying in Pre-QB.

3.3. *-yaq 'as far as; until'. This case suffix, which seems to have the same distribution as *-ku and *-yā, competes

		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
1	*-ku			+	+	+	+	+	+	+	+	+	+	+	?						
2	*-yā			+	+	+	+	+	+	+	+	+	+	+	?						
3	*-yaq			+	+	+	+	+	+	+	+	?	+	+	?						
4	*-skI			+	+	+	+	+					+	+	?						
5	*-kā	?	?	x	x	x	+	+	x	x	x	?	x	x	?	?	?	?	?	?	x
6	*-r{k,p}U	+	?	?	?	?	+	+	+	+	?	?	+	+	?	?	?	+	?	?	+
7	*-rka	+										(+)					+	+		+	+ +
8	*-t			+	+	+	x	?			+										
9	*-piq	+								+	+										
10	*-špa										+	+									
11	*-čka	+																			
12	*-štin	+																			
13	*-tya	+																			

TABLE 5

DIFFERENTIAL SUFFIX DISTRIBUTION IN QB

in many lects with *-kama. It has not been determined whether in these lects the two suffixes have identical functions. *kama is reconstructible for PQ as a root of the ambivalent noun-verb type, and since it is universal as a case marker in QA but only sporadically present with this function in QB, I suspect it may have been borrowed into QB during the Inca occupation. *-kama has been omitted from Table 5 only because its distribution is very poorly known at present.

3.4. *-skI Urgency. This DVV suffix, //-ski// → [-ska] in certain morphological environments, occupies the same position class with //-ykā// Durative and indicates the need for immediate action. *-skI is found only in the lects of eastern Ancash and western Huánuco, where it is used with very high frequency.

3.5. *-kā Passive. The many x's in row 5 are to be interpreted as indicating that the very small wordlists available for the relevant lects show at least one stem such as //rikākā-// 'to be seen, appear'. Such forms consist of a transitive verb root plus *ka- 'to be' (no DVV suffixes may intervene), and have passive meaning. They are phonetically single words (including, of course, at least one verb suffix), though the vowel length of *-kā is probably a reflection of its status as morpheme which, unlike the true suffixes, may follow external word boundary. The morphological studies and suffix lists available up to 1970--for Huaylas, Llata, and Tarma--did not indicate the passive construction as productive; I was therefore surprised during fieldwork in Llamellín, summer 1970,

to find that most transitive verbs could be passivized there. (Several possibilities were rejected by the informants, but no reason could be found.) To exemplify the active:passive relationship:

Pedru yantata aparqan.	⇒	yanta apakarqan Pedrupa.
Peter firewood carried -Acc.		firewood was car- Peter-by ried
'Peter carried firewood.'		'Firewood was carried by Peter.'

Future research may well show that the passive construction is present in all lects of QB.

3.6. *-r$\{^{k}_{p}\}$U Purposive. To judge from the known distribution of this suffix, it is probably present in all lects. Its meaning is highly elusive; informants and linguists alike have given it a variety of semantic interpretations, but in my opinion, based on study of the lects of Huaylas and Antonio Raimondi, it indicates that the action denoted by the root is only a means to some more important end. Thus, for example, [upúšuŋ] 'let's drink' could be understood as meaning that the speaker feels like getting drunk, while [upurkúšuŋ] specifies that that the act of drinking is subordinate to the social aspects of the situation. The second consonant is most often [k]; U represents //u// → [a] in certain morphological environments. In Tarma this suffix has the shape //-rU// (cf. 2.176).

studies of Creider (1968) and Cerrón (1969), however, that the basic function of the suffix is something other than person pluralization though neither author was able to describe its "non-pluralizing" uses.

3.8. *-t Completed State DVN. This nominalizer was first recorded in August 1970, and its discovery came as a surprise for both grammatical and phonological reasons. Word-final [t] had been previously believed absent in all lects of Quechua, and the maximum number of deverbative nominalizations was thought to be five. The t-nominalization is productive in the Ancash provinces of Corongo, Sihuas, Pomabamba, and Aija, and is represented in at least one idiom //warāti// 'all night long, till dawn' in Antonio Raimondi. Its function is not entirely clear from the small corpus elicited. The following examples are from Sihuas.

warat 'all night long, till dawn' (warā- 'to dawn')

kačaykamunki yakuta waratpaq. 'You'll release water for the entire night'

ušakat 'till it ends' (ušaka- 'to come to an end')

qiʔqašun ušakat. 'let's write till its finished'

ušakatčawnaqa āri quykuyʔana. 'Since its almost all gone, give it all to him'

ušakatmanna čaykunaq kā. 'I had reached the final stage'

I could not elicit this nominalization with accusative or any

competes with the pan-QB *-pita.

3.10. *-špa Simultaneous Action Subordinator. I have found this subordinating ending only in Southern Huaylas and Aija, though to judge from Torero's statement that it exists "en algunos puntos de Ancash y Huánuco" (1964:471), its distribution is somewhat greater. In all QB lects excep Southern Huaylas and Aija there is a single, uniquely QB, subordinator that indicates identity of subject between subordinate and independent clauses. This suffix *-r, in the lects that do not contrast it with *-špa, is indifferent to aspectual relations between subordinate and independent actions; thus, e.g. //mikur// 'having eaten, if one eats, when one eats (or has eaten), while eating'. In Southern Huaylas and Aija, on the other hand, //-r// indicates background action or condition, and //-špa// indicates simultaneous action.

3.11-3. *-čka Durative DVV; *-štin Simultaneous Action Subordinator; *-tya Simulated Action DVV. In QB these three endings are found only in Huanca, and since they are also characteristic of Southern QA we must suspect borrowing from the Ayacucho lect of QA. Note furthermore that the third of these has been recorded nowhere except in Huanca and Ayacucho. Huanca contains the pan-QB Durative *-ykā beside *-čka, but Cerrón (1969) does not explain how or whether they contrast.

3.14. Further research on QB lects will undoubtedly turn up

NOTES

1 The research on which this study is based has been supported in part by the National Science Foundation, Grant No. GS-3034. A preliminary version was presented as a talk "Dialect Differentiation in Central Peruvian Quechua" at the annual meeting of the American Anthropological Association, Nov. 1970.

2 The term "isolect" was first suggested (to my knowledge) by G.B. Milner in personal communication to Albert Schütz; the term "lect" has been used in recent studies by Charles-James N. Bailey. The present definitions are compatible with the previous uses but are somewhat more specific.

3 For the relationship between these rule types, see Labov, forthcoming.

4 The nature of the data on hand forces us to make this distinction, though with future field research closer observation of the facts will allow more exact statements. The two uses of x in this study are seen most clearly in the detailed discussions of rules 2b and 4a below.

5 The only similar change known in Quechua is the loss of intervocalic *w in Argentinian; in this case adjacent vowel nuclei rather than long vowels have resulted.

6 The phonological history of this morpheme is obscure, and I have discussed some of the more likely interpretations in CQPG-IV (150, 197). I reconstructed the first person marker for Proto-Quechua as accent on the final vowel of a noun or verb stem (or on the epenthetic syllable *ni in the case of a noun stem ending on a consonant) though it is also quite plausible to treat it as an innovation in PQB as Wölck (1969:12-3) has done, where the form *-y of Quechua A is treated as the older (PQ) one.

7 Compounding is quite uncommon in Quechua, and this particular compound is especially unusual since the first root is a verb rather than a noun. But if we reconstruct an earlier form *apay-yaku containing the infinitive nominalization *apay the pattern is a more likely one and we also gain a way of explaining the final *y of *apa-yakuy. A change from *apay-yaku to *apa-yakuy has no parallel known to me, though I feel it is a plausible hypothesis. The final *y could also be treated

8 The last two of these possibilities were not reconstructed in CQPG-II because their existence was first discovered during the summer of 1970.

9 Of these four morphemes, *kumsa- and *kimsa show a special change *m > ŋ in certain areas. The resulting sequences [ŋs] and (with Rule 2b) [ŋh] were both surprising to find. In all other forms of Quechua for which such detail is available the unmarked syllable-final nasal is specified as velar except before obstruents where it assimilates in position. [ŋs], as well as [ŋf] in loanwords (e.g. [koŋfítis] 'candy') shows that in these lects the assimilation rule applies only before stops. [ŋh] is the first cluster of the type consonant+h ever recorded in Quechua, and was specifically prohibited by a neutralization rule in my recent treatment of Huaylas phonology (Parker 1970:154).

10 The sequences [ii~iyi] are possible at least in Huaylas where they are recorded in one lexeme //tiyi// 'parent's sibling' irregularly derived from Sp. tío 'uncle' and tía 'aunt'.

11 To be more specific, two sound changes can be considered linguistically (as opposed to geographically) related only in the sense that they represent earlier and later stages of a single more general change. And only in the situation that R2 implies R1 is a change R2 the result of generalization of a change R1. If two changes overlap in space in such a way that neither always implies the other, any similarity between them must be considered accidental in the sense that their origins must have been independent.

12 In order for Rule 5 to be a possible substage of a more general change that began with Rule 4a, it would also be necessary to define the nasals as stops ([-Continuant]). In Parker 1970 I argued against defining nasals as stops, though the problem is a difficult one that must be studied further.

It is interesting to note that while in northern lects of QB all palatal consonants are fronted except *š, in Southern QA *š is the only palatal consonant to undergo fronting.

13 For example, if //č// in lects D-M reflected two different PQ affricates it could not correspond regularly to //č// in lects S-T, but in fact it does.

14 It would be interesting to investigate the linguistic situation of Yanacocha and Piscy in the context of its recent social

15 The effects of these changes on *aw were not mentioned in my description of Huaylas phonology because in Huaylas *aw could be treated as lexical //ɔ//. The wider perspective of the present study does not allow such a treatment.

16 This constraint was not recognized in my description of Huaylas phonology. Fieldwork during Ju'y 1970, following the completion of that paper, turned up the lexemes that made the constraint recognizable; cf. Parker 1970:157-8.

17 The final short vowels in [táxe] and [kéʸo] are due to a probably pan-QB rule that shortens long vowels before external word boundary in rapid speech. For the formulation of this rule, see Parker 1970:159-60.

18 Torero's (1964:452) account of the reflexes of *q is at variance with my own observations in certain respects. He does not distinguish (for most lects) between syllable-initial and syllable-final positions, which I find to produce different reflexes in most cases, and he makes a distinction between uvular trill and uvular spirant which I have not observed to be consistent anywhere (this is related to the observation that a uvular trill and a uvular spirant seem never to contrast in any language).

REFERENCES

BAILEY, Charles-James N. 1970. Building Rate into a Dynamic Theory of Linguistic Description. U. of Hawaii Working Papers in Linguistics 2/9:161-233.

BAILEY, Charles-James N. and Gary J. PARKER. 1970. Variant Sub-Weightings of M's in Marking Theory. U. of Hawaii Working Papers in Linguistics 2/8:113-28.

CERRON P., Rodolfo. 1967. Fonología del Wanka. In: Escobar, Parker, Creider y Cerrón, 53-80.

_____. 1969. Wanka Quechua Morphology: Word and Periphrasis. Cornell U. M.A. thesis.

CHOMSKY, Noam, and Morris HALLE. 1968. The Sound Pattern of English. New York: Harper and Row.

CIEZA DE LEON, Pedro. 1553. La Crónica del Perú. In: Le Riverend Brusone, Julio J. (ed.), Crónicas de la Conquista del Perú, México: Editorial Nueva España. [no date!

CREIDER, Chester. 1967. Fonología del Quechua de Picoy. In: Escobar, Parker, Creider y Cerrón, 41-52.

_____. 1968. A Morphological Sketch of Tarma Quechua. U. of Minnesota M.A. thesis.

ESCOBAR, Alberto. 1967. Fonología del Quechua de Yanacocha. In: Escobar, Parker, Creider y Cerrón, 8-24.

ESCOBAR, Alberto, Gary J. PARKER, Chester CREIDER, y Rodolfo CERRON, Cuatro Fonologías Quechuas. Lima: Plan de Fomento Lingüístico, Universidad Nacional Mayor de San Marcos. 1967.

HARMS, Robert T. 1968. Introduction to Phonological Theory. Englewood Cliffs, N.J.: Prentice-Hall.

JAKOBSON, Roman, Gunnar FANT, and Morris HALLE. 1952. Preliminaries to Speech Analysis. Cambridge: MIT Press.

KING, Robert D. 1969. Historical Linguistics and Generative Grammar. Englewood Cliffs, N.J.: Prentice-Hall.

Misioneros Franciscanos de los Colegios de Propaganda Fide del Perú. 1905. Vocabulario Políglota Incaico. Lima.

PARKER, Gary J. 1969$_a$. Comparative Quechua Phonology and Grammar I: Classification. U. of Hawaii Working Papers in Linguistics 1/1:65-87.

_____. 1969$_b$. Comparative Quechua Phonology and Grammar II: Proto-Quechua Phonology and Morphology. U. of Hawaii Working Papers in Linguistics 1/2:123-47.

_____. 1969$_c$. Comparative Quechua Phonology and Grammar III: Proto-Quechua Lexicon. U. of Hawaii Working Papers in Linguistics 1/4:1-61.

_____. 1969$_d$. Comparative Quechua Phonology and Grammar IV: The Evolution of Quechua A. U. of Hawaii Working Papers in Linguistics 1/9:149-204.

_____. 1969$_e$. Ayacucho Quechua Grammar and Dictionary. The Hague: Mouton and Co.

_____. 1970. Huaylas Quechua Phonology: A Preliminary Generative Statement Using Markedness Theory. U. of Hawaii Working Papers in Linguistics 2/4:143-76.

PARKER, Gary J. and Charles-James N. BAILEY. 1970. Ternary Markedness Values? An Approach to the Measurement of Complexity in the Operation of Phonological Rules. U. of Hawaii Working Papers in Linguistics 2/4:131-42.

SANTO TOMAS, Fray Domingo de. 1560. Gramática o Arte de la Lengua General de los Indios de los Reynos del Perú. Lima: Universidad Nacional Mayor de San Marcos (1951).

SCHACHTER, Paul. 1969. Natural Assimilation Rules in Akan. IJAL 35/4:342-55.

TORERO, Alfredo. 1964. Los Dialectos Quechuas. Anales Científicos de la Universidad Agraria (La Molina, Lima) 2.446-78.

_____. 1968. Procedencia Geográfica de los Dialectos Quechuas de Ferreñafe y Cajamarca. Anales Científicos de la Universidad Agraria (La Molina, Lima) 6:291-316.