Language Convergence or Divergence: The Case of the Apali (Emerum) Language*

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1 Introduction

The Apali (Emerum) language is a Papuan language spoken by approximately 600 people living in widely scattered hamlets in Aiome District of Madang Province. As in many Papuan languages, each hamlet or group of hamlets has its own distinct communalect. In the Apali language these communalects are grouped into at least two widely acknowledged dialects on the basis of their word for 'what'–*aki* and *aci*.[1] Speakers of both dialects agree on the fact that these two dialects are to be considered one language which is distinct from the surrounding languages. Cognate percentage counts between the dialects based on phonetic similarity are in the range of 82% to 90%. As is frequently the case in dialect differences, cognate percentage tends to vary directly with geographical separation.

The purpose of this paper is to examine evidence that the Aki and Aci dialects of the Apali (Emerum) language developed by convergence rather than divergence. The phonological evidence is inconclusive, but the divergent grammatical forms suggest the possibility that the dialects may have originally been two distinct languages that converged. In the process of convergence, vocabulary items were adopted and phonologically modified to fit the more frequent sound system patterns of the dialect but divergent grammatical forms remained as evidence of the distinct origins of the dialects.

Section 2 outlines the social situation in Apali in light of the accepted definitions of convergence and divergence. In sections 3 and 4 the phonological and grammatical differences between the dialects of Apali are examined and compared with other languages in the area. In section 5 information from a traditional legend is introduced to shed light on the current situation.

[1] In the practical orthography <c> and <j> represent /tʃ/ and /dʒ/, <f> and <v> represent /ɸ/ and /β/, and <h> represents /x/.

2   Divergence, Convergence, and the Apali Social Situation

Crystal (1985:100) defines divergence as

> A term used in sociolinguistics to refer to a process of dialect change in which the dialects become less like each other (or 'diverge'). This process (sometimes called 'dialectalisation') is only likely to happen in the absence of geographical and social links between populations within a speech community, lines of communication thereby being few or difficult, and a standard dialect probably being non-existent. The opposite effect is know as convergence. 'Divergence' also has a currency in historical linguistic studies, referring to the splitting of a form into two contrastive units. (small caps taken out)

Crystal (1985:74) defines convergence as

> A term used in sociolinguistics to refer to a process of dialect change in which the dialects become more like each other (or 'converge'). This usually happens when a non-standard dialect falls under the influence of the standard, but it may happen the other way round – as in the current development of modified forms of received pronunciation in English. Geographically adjacent speech communities are some-times referred to as 'convergence areas'. The opposite effect is known as divergence. 'Convergence' also has a currency in historical linguistic studies, referring to the merging of forms which at an earlier stage of a language were contrastive. (small caps taken out)

In historical linguistics, language divergence has often been described as playing a major role in language development. Related languages are generally viewed as having derived from a common source, as is noted in Anderson (1973:9): "Nineteenth-century scholars saw separate languages as the result of divergence from an earlier and often unknown common source." Divergence and proto-languages continue to play a crucial role in historical linguistics. In contrast, only brief mention has been made of the role of convergence in language development. Sporadic convergence of words is sometimes mentioned as part of the development of languages, but very little emphasis has been placed on the role of convergence in language development. Foley (1986) is an exception to this general tendency. He mentions several languages in Papua New Guinea in which conver-gence as well as divergence have contributed to language development. The role of convergence is especially noted in the diffusion of areal features.

One of the key elements that Crystal's (1985:100) definition points to as necessary for divergence is the "absence of geographical and social links between populations within a speech community." If the Apali language was originally a unified whole that diverged in recent times, then the crucial missing element is the absence of contact. Multilingualism is highly prized in the area and all leaders are actively or passively bilingual in three or four distinct languages. Most speakers of both dialects are passively bilingual in the other dialect

and some adult speakers can speak both dialects to a certain degree, though it is mainly the Aki speakers who are actively bingual in the Aci dialect and not the reverse.

Although some marriages occur within a dialect group, most marriages involve intermarriage between the dialects or with one of the neighboring languages. In marriages with women from other language groups, the wives generally learn the dialect of Apali that their husbands speak. Intermarriage between the two dialects is a slightly different situation. Aki speaking women that marry into the Aci dialect generally adopt the Aci dialect. Aci speaking women that marry into the Aki dialect, however, generally continue to speak the Aci dialect. Children usually speak the dialect of their fathers, but Aki speaking children with Aci speaking mothers have a much larger percentage of vocabulary borrowed from the Aci dialect. This continued borrowing of vocabulary over the years has probably contributed to the convergence of the Aki and Aci dialects.

In genealogies that go back several generations there are repeated examples of the intermarriage the two dialects. Assuming that this has been the case for known history, it is surprising that there is such a great difference between the dialects. In the following sections I look at some of the phonological and grammatical differences between the dialects, as well as possible explanations for these differences.

3   Phonological differences

The phonological differences between the dialects could probably be easily explained by divergence from a common proto-Apali with subsequent interaction between the dialects. An examination of the phonemes and their allophones shows the basic unity of the language. The correspondences between the dialects are generally predictable and could be used to show that the dialects developed through divergence. The distinct differences in frequency of phonemes and their distribution, however, may lead one to a closer study of the differences in the dialects. Brief mention will be made of the phonological systems of neighboring languages for the light they shed on the situation.

3.1   Phonemes

Both dialects have the inventory of phonemes shown in Table 1. These phonemes, however, have some distinctive manifestations in the two dialects. One of the differences between the two dialects is that most sounds, especially vowels, are generally more fronted in the Aci dialect giving all the speakers of the Aci dialect a distinctive sound. In addition three of the consonants are realized by different allophones in the two dialects.

TABLE 1: APALI PHONEMES

p	t	tʃ	k
b	d	dʒ	g²
ɸ			x
β			
m	n		ŋ
	l		

	i		u	
	e	ɨ	o	
		a		

The /l/ phoneme in the Aci dialect is realized as a flap rather than an approximate as in the Aki dialect. In the part of the Aci dialect that is geographically closest to the Aki dialect, the /l/ in the initial position is realized as a very fronted flap. In the part of the Aci dialect that is on the outer edge of the language group /l/ has been completely replaced by /t/ in word initial position.

The two affricates that are generally in the alveolar/alveopalatal range (/tʃ/ and /dʒ/) in the Aki dialect are realized as dental stops in the Aci dialect with the tongue blade being the articulator. Preceding /i/, however, the phonemes are almost identical in the two dialects. Both Aci and Aki speakers perceive this difference in allophones as major and want to see it represented in the practical orthography. This difference makes it very hard for Aci and Aki speakers to correctly write the other dialect.

Not only is the phonemic inventory identical in both dialects, the same basic morphophonemic processes occur in both dialects. One common morphophonemic process changes /u/ and /l/ to /b/ and /d/, respectively, following a nasal. In the Aki dialect these processes apply optionally resulting in fluctuation in pronunciation between forms with [u] and [l] and forms with [b] and [d]. Probably as a result of this variation Aki dialect speakers generally prefer to write words in the underlying phonological form. In the Aci dialect, however, the processes are obligatory; no words are pronounced with [u] or [l] after a nasal. A writing system based on the underlying phonological forms is not accepted in Aci. Compare the following equivalent sentences in Aci and Aki written in the practical orthography.[3]

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[2] All voiced stops are phonetically prenasalised.
[3] The following abbreviations are used in this paper:

FP	far past	PR	present continuous	CON	contrafactual	SS	same subject sequential
YP	yesterday past	IF	immediate future	IMP	imperative	DS	different subject
TP	today past	FUT	future	PRO	prohibitive	P/N	person/number
IP	immediate past	HAB	habitual	SIM	similarity	2s	2nd sing
						3s	3rd sing

1) *Udinaŋ   bi.*   (Aci)
    Ubanaŋ   ui.   (Aki)
    go:FUT:2s say:3s
    '"Will you go?" he said.'

2) *Haman   didi.*   (Aci)
    Hameŋ   libali.   (Aki)
    MD:SIM do:FUT:3s:FUT
    'He will do it like that.'

3.2   Correspondences

In addition to the differences in allophones, there are general differences between the actual phonemes used in words. Table 2 lists some of the common correspondences between the dialects. (See Appendix 1 for a list of cognate words in the two dialects that illustrate these differences.)

TABLE 2: CORRESPONDENCES BETWEEN DIALECTS

Aki	Aci
/x/	/k/[4]
/x/	/tʃ/
/β/	/p/[5]
/l/	/t/[6]

The cognate terms tend to be the core vocabulary items that occur on various lists used in surveys. Outside of these core vocabulary items there tend to be fewer cognates. I did a rough cognate count from several sections of consecutive dictionary entries in the Apali dual dialect dictionary which includes both core and non-core vocabulary items and found that the cognate percentage between the two dialects was about 77%. From that same section of the dictionary only 40% of the entries were identical phonemically in both dialects and only 34% of the entries would be pronounced in the same way in both dialects. These low percentages between the dialects help to explain some of the miscommunication that occurs between speakers of the Aki and Aci dialects who are not bilingual in the other dialect.

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[4] There are 106 examples of this correspondence in my dictionary. There are 21 examples of an /x-x/ correspondence, all in initial position. In the side of the Aci dialect farthest from the Aki dialect even these are often /k/. There were 7 examples of a /k-k/ correspondence, all in medial position. This correspondence is discussed more fully in section 3.3.

[5] This correspondence occurs primarily in word initial position.

[6] As noted above, this correspondence occurs primarily in word initial position.

3.3   Frequency and distribution

The differences between the frequencies of /x/ and /k/ in the two dialects are quite substantial and worthy of further examination. Tables 3, 4 and 5 show the frequency counts for /x/ and /k/ from the two dialects as taken from texts. In both dialects /k/ occurs predominantly in the medial position. In fact, all initial occurrences of /k/ in the Aki texts used for these statistics are due to five occurences of the word *kili* 'tree'. This is a loan word from Aci that is frequently used in Aki instead of the Aki word *lali* 'tree' because *lali* is a swear word in the Aci dialect. In the Aci dialect /x/ occurs predominantly in the initial position. In the Aki dialect there is a more even distribution of /x/ though it still occurs predominantly in the initial position.

As shown in Table 3, the combined percentages of /x/ and /k/ in both dialects are almost identical (8.25% in Aci versus 8.16% in Aki). In both dialects /x/ predominates in initial position. In medial position, however, /x/ predominates in Aki while /k/ predominates in the Aci dialect. In general, the Aci dialect tends to have a higher predominance of stops and the Aki dialect has a predominance of fricatives.

TABLE 3: FREQUENCY OF /X/ AND /K/ IN ACɨ AND AKɨ TEXTS

	Aci (11,370 phonemes)		Aki (12,586 phonemes)	
	Number	% of Total	Number	% of Total
/x/	526	4.63	948	7.53
/k/	412	3.62	79	0.63
Total	938	8.25	1027	8.16

TABLE 4: DISTRIBUTION OF /X/ AND /K/ IN ACɨ TEXTS

	Initial		Medial	
	Number	% of Total	Number	% of Total
/x/	465	88.40	61	11.60
/k/	36	8.74	376	91.26

TABLE 5: DISTRIBUTION OF /X/ AND /h/ IN AKɨ TEXTS

	Initial		Medial	
	Number	% of Total	Number	% of Total
/x/	622	65.61	326	34.39
/k/	5	6.33	74	93.67

The differences in frequency between fricatives and stops could be accounted for in terms of a historical consonant shift from fricatives to stops. In fact the types of shifts that took place between Low and High German (as noted in Bynon 1977:175) are remarkably similar to the shifts that could have taken place between the Aki and Aci dialects.

Another possible explanation for the differences in frequency is that they are due to borrowing. While the stops /p t k/ do exist in the Aki dialect, they are so infrequent that they could have been imported into the phonology from another language. They are used in some core vocabulary items such as *aki* 'what' and *mika* 'tooth', but these words could have easily been imported into the Aki dialect from the Aci dialect, as is currently happening with the Aci word *kili* 'tree'.

It is clear that *mika* 'tooth' has been borrowed in recent times. When the older adults of the Aki dialect were children (about 40 years ago) the word for tooth that was used was *ma*, but this word has been completely supplanted by the Aci dialect term *mika*.

It is also possible that *aki* 'what' has been borrowed. The Aki dialect has two words for 'what' – *aki* and *huliviŋ*. The word *aki* is cognate with the Aci term, but the word *huliviŋ* is basically only present in the Aki dialect area. The only Aci speaking village in which it is known and occasionally used is the one that has the most contact with the Aki speaking area. The term *huliviŋ* is slowly dying out as can be seen by the fact that it is mainly the older people who still use the term regularly. The antiquity of *huliviŋ*, however, is attested by the fact that *huliviŋ* rather than *aki* is used in a traditional dialogue or joke-type saying that is spoken when people are eating mangoes.

Vocabulary items continue to be shared between the two dialects on a regular basis. If the borrowed words do not contain any of the phonemes /p t k x/ in crucial positions then they are often accepted and used as they are. If the voiceless stops or /x/ are involved then the word may be adopted, but it is first adapted phonologically so that it conforms to the more frequent sound system patterns of the dialect. This kind of sharing goes both directions, but it is definitely more frequently the case that the Aki speakers are adopting the Aci terms. The Aci dialect speakers find it almost "impossible" to pronounce words from the Aki dialect if they have too many fricatives in them and are reluctant to even try to say them.

3.4   Comparisons with neighboring languages

The two closest language groups to the Apali speaking area are Nend (Angaua), which is to the west and contiguous with the Aki speaking area, and Mum (Katiati), which is located to the north of both the Aki and Aci speaking areas as shown in Map 1. According to Wurm (1982:71) the Apali (Emerum) language and the Nend (Angaua) language are both in the Wanang Stock, while Mum is not. A comparison of word lists collected in Apali with word
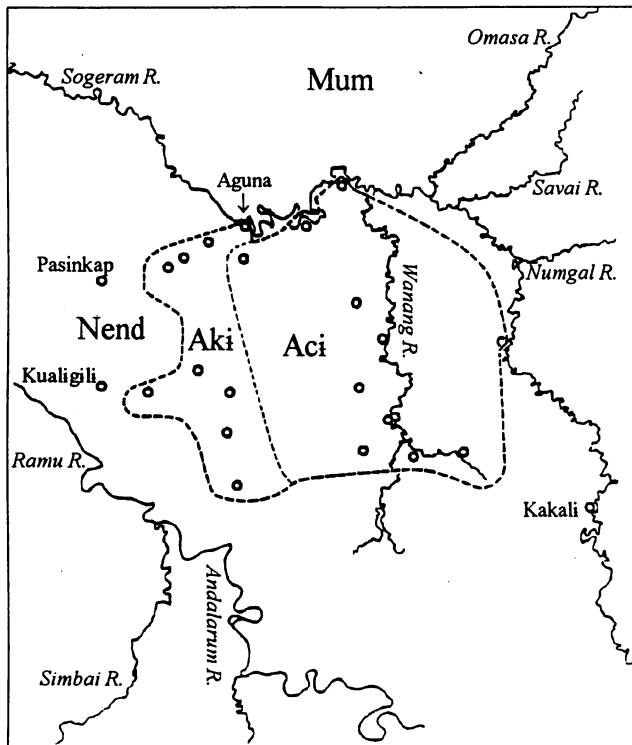
MAP 1: APALI DIALECTS AND SURROUNDING LANGUAGE GROUPS

lists collected by Harris (p.c.) in Nend and Sweeney (p.c.) in Mum, however, result in cognate percentages of about 50-55% between Mum and Apali, as opposed to only 30-35% between Nend and Apali.

A brief examination of the phonological systems of Mum and Nend as listed in appendices 2 and 3 shows that the Apali phonological system is also more similar to the Mum phonological system than to the more complex Nend phonological system. The Mum language, like the Aci dialect, has a preponderance of stops. The /k/ phoneme occurs almost exclusively in initial position in forms that occur with /x/ initially in cognate forms. Similarly, /p/ occurs almost exclusively in initial position in forms that occur with /ɸ/ or /β/ initially in cognate forms.[7] In addition to being similar to Mum, the Aci dialect is also similar to Nend in that both have fronted alveolar (dental) stops.

The Aki dialect is dissimilar to Mum in its preponderance of fricatives as opposed to stops. In addition, although the Aki dialect is located between the Aci dialect and the Nend

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[7] In fast speech, however, the stops in the Mum language tend to be realized as fricatives.

language, it is dissimilar to both in that it lacks dental stops. Finally, while the phoneme /ɸ/ is present to a limited degree in the Aci dialect, it is more frequent in the Aki dialect. Neither Mum nor Nend have the /ɸ/ phoneme, however.

In the area of vowels, the influence of Nend on Apali is seen in the increasing presence of /e/ and /o/, vowels which are totally absent in Mum. In both the Aki and Aci dialects these vowels are very rare and are generally the result of morphophonemic processes. The younger generation of Apali speakers, however, are increasingly incorporating /e/ and /o/ into content words and see these vowels as units in and of themselves.

3.5   Conclusions from phonological evidence

Language divergence could probably explain most of the phonological differences between the two dialects. Historical reconstruction might be used effectively to develop a proto-Apali form that could have served as a basis for the development of the two dialects through divergence. The infrequent usage of /p t k/ in the Aki dialect and the presence of dental stops in the Nend language and the Aci dialect, but not the Aki dialect, however, at least give reason to pause and reconsider the evidence before saying that the phonological differences all came about by means of simple divergence.

4   Grammatical Evidence from Verbal Affixes

Foley (1986:262) says, "Papuan languages often seem to be subject to a more rapid turnover in basic vocabulary than in basic morphology." From my study of the Apali language I can affirm that there has been and is a continuing "rapid turnover in basic vocabulary" which is mainly through the accepting of the Aci term by the Aki speaking people. Younger Aki speaking people often do not know which is "their own" term.

If the Aki and Aci dialects were originally two separate languages that converged, then it is probably the case that the sound systems would change through convergence before grammatical features would change. If this is the case, then grammatical differences between the two dialects of Apali may point to a difference that has continued after the convergence of the sound systems. While the overall grammars of the two dialects are basically the same, there are definite morphological differences between the dialects in some of the most commonly used verb forms.

4.1   Verbal affixes in Aki and Aci

The Aki and Aci dialects differ most conspicuously in the number of past tenses and aspects that they have. The Aki dialect has six past forms: immediate past tense, today past tense, yesterday past tense, far past, historic past tense, and historic past habitual aspect. The yesterday past tense and the historic past habitual aspect are totally missing in the Aci dialect. In addition to these differences there are differences in the forms of the habitual aspect, future tense, and same subject sequential suffix as can be seen in Table 6.[8]

TABLE 6: VERB SUFFIXES IN AKɨ AND ACɨ

	Aki	Aci
IP	P/N	P/N
TP	*-iem*	*-iem*
YP	*-malam*	—
FP	P/N	P/N
HP	*-m.*	*-mad*
HP HB	*-adam*	—
PR	*-d*	*-d*
HB	*-l*	*-hid*
FUT	*-ba*	*-d*
IF	*-bal*	*-bal*
SS	*-vila*	*-ca (hine)*

In addition to the differences in form, there are distinct differences in the function of the same subject sequential marker in the two dialects. In the Aki dialect, *-vila* 'SS' may occur on all verbs and appears in almost every multi-clause sentence. When two activities are very closely connected in both time and the nature of the activity, then the unaffixed verb roots will occasionally be used, but this is the exception, not the norm. In the Aci dialect, the normal form of the same subject sequential verb is the unaffixed verb root or a verb phrase involving *hine* 'stay'. In addition the suffix *-ca* occurs on a limited number of verbs to indicate same subject sequential.

4.2   Comparisons with neighboring languages

Bynon (1977) has several lengthy discussions of multilingual situations around the world that have resulted in convergence in the phonology, lexicon, and even syntax. These

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[8] Other differences that are mainly phonological may be noted in the complete conjugation of the verb *n-* 'eat' listed in appendix 4.

changes are due to continual interference over an extended period of time. She suggests the following method for analyzing situations in which there has been "intimate contact of two languages in a bilingual situation." (Bynon 1977:243-44)

> For each grammatical rule which they share and which is an innovation in one of them the donor language and the recipient language must be determined. This is done by comparing the languages concerned with closely related languages outside the area of contact, and in each case those innovations which are peculiar to the local language and which have counterparts in the other languages spoken locally will be attributed to language contact. In this way the historical changes which were responsible for the current isomorphism of the local languages may be isolated.

This approach was used by Bynon in analyzing local varieties of languages which had changed from the standard form of the language due to intense contact with other languages. Similar approaches have been used by Foley (1986:263-268) in examining the diffusion of features in contiguous languages and Roberts (1991:79-80) in examining differences in dialects and the influence of contiguous languages. In a search for the source of the grammatical differences between Aki and Aci I have looked at data from two neighboring languages, Mum and Nend.

As far as the overall method of putting verbs together, the Apali and Mum languages are most similar in that they both tend to have a root plus easily separated suffixes that are added to the verb root. The Nend language in contrast has several tenses in which the verb roots are reduplicated, though the person/number suffixes are still generally the last suffix on the verb. In all three languages, the first and third person singular suffixes are identical and the second person singular suffixes are cognate. In addition, the first person plural suffixes are cognate in Mum and Nend and the second person plural suffixes are cognate in Mum and Apali. Apali and Nend both form the third person plural by adding a plural suffix to the third person singular verb form. Nend also adds the plural suffix to the second person singular verb form to form the second person plural verb form.

The number and function of tenses in the Aki dialect are almost identical to those in the Nend language, but the actual morphemes used are generally different. The Mum language, in contrast to the Nend language and the Aki dialect, has only four past tenses. Although the number of past tenses in the Mum language is identical to the number of past tenses in the Aci dialect, the distribution of the tenses is different as shown in Table 7.

TABLE 7: PAST TENSE SUFFIXES IN APALI, NEND AND MUM

	Nend	Aki	Aci	Mum
IP	P/N	P/N	P/N	P/N
TP	-di	-iem	-iem	–
YP	-em	-malam	–	-s
FP	P/N	P/N	P/N	-sm
HP	-mad	-m	-mad	-m
HP HB	-ad	-adam	–	–

The Mum language is missing the today past tense while the Aci dialect is missing the yesterday past tense. One possible explanation for the difference as to which tense is missing arises from the fact that the Apali today past suffix -iem is cognate with the Nend yesterday past suffix -em. None of the Mum verb forms closely match up with either the -iem or -em suffix. The fact that the today past tense in Apali and the yesterday past tense in Nend are cognate forms indicates that these two tenses have probably been grouped together for many years. As a result, the Mum language and Aci dialect apparently use their available markers for one, but not both of these tenses. The Aci dialect maintained the today past tense and the Mum language maintained the yesterday past tense using a non-cognate verb suffix.

While the Aci dialect is like the Mum language in that it lacks a historical past habitual form, it is also similar to the Nend language in that it shares similar historic past tense forms. The historic past tense suffix in both is a combination of -m plus -ad with unique person number suffixes. In the Aki dialect and the Mum language, on the other hand, the historic past tense suffix is -m. In addition, both the Aci dialect and Nend language use the same third person P/N suffixes in the historical past forms as in the far past tense forms, while the Aki dialect and Mum language use the same third person P/N suffixes as are used in the immediate past tense forms. Thus the Aci and Nend forms for 'eat' in third singular historic past tense are almost identical: Aci namali versus Nend namal. Similarly, the Aki and Mum forms are almost identical: Aki nami versus Mum tami. In the historic past habitual, Nend uses only -ad in conjunction with a slightly different set of person number suffixes. The historic past habitual suffix in the Aki dialect is a combination of -m and -ada, but with the opposite order from the two suffixes in the Nend historic past tense.

TABLE 8: HABITUAL AND OTHER SUFFIXES IN APALI, NEND AND MUM

	Nend	Aki	Aci	Mum
TP	*-di*	*-iem*	*-iem*	–
YP	*-em*	*-malam*	–	*-s*
PR	*-bila*	*-d*	*-d*	–
HB	*-l*	*-l*	*-hid*	*-d*

As noted above, the habitual suffixes are very distinctive in the Aki and Aci dialects. The habitual suffixes for Apali, Nend, and Mum are included in Table 8. The Aki dialect form of the habitual matches up with the Nend habitual suffix *-l*. The Aci dialect form appears to be most similar to a serial verb phrase using *hid-* 'walk', but it is also similar to the today present suffix *-di* in Nend and to the habitual suffix *-d* in Mum. The use of the *-d* suffix for the habitual in the Mum language makes it similar in form to the present continuous in Apali. The present continuous, however, is one of the aspects that is missing in Mum.

In evaluating the likelihood of the Aci habitual suffix being related to the Nend today past suffix we need to look at the changes that may have occurred in several different tenses/ aspects between Nend, Aki, and Aci. The present continuous suffix in Nend is *-bila* and the today past suffix is basically *-di*. In the Aki dialect the yesterday past suffix is *-malam* which may or may not be cognate with the Nend present continuous suffix *-bila*. The Aki form of the present continuous *-d* is possibly cognate with the today past suffix in Nend. Since the today past in Aki and the yesterday past in Nend were seen to be clearly cognate earlier, then it seems quite possible that the present continuous marker somehow got involved in a shuffling of the present continuous, yesterday past and today past forms. Since present continuous suffix in the Aci dialect, *-d*, is the same as that in the Aki dialect, then it is probably less likely that the Aci habitual form is related to the Nend today past form *-di*.

The other possible source for the habitual in Aci is a serial verb phrase using *hid-* 'walk'. In the Mum and Nend languages the verbs *kid-* 'walk' and *da* 'walk' are used in various verb phrases to indicate some notion of duration in the activity. In Nend the preceding verb can be either a reduplicated form or a medial verb with either a same or different subject marker, but in either case the verb *da* is rarely a final verb when used to indicate duration of an activity. In Mum, *kid-* is preceded by a verb with the same subject marker when it is being used to communicate duration of an activity. The verb *kid-* has not been found preceded by a reduplicated verb in these constructions.

The uses of the verb *hid-* 'walk' in the Aki and Aci dialects are distinctly different from each other. In the Aki dialect, it is almost always used to convey physical motion. In those cases where it is used with a preceding verb to convey duration of an activity, the preceding verb is always the reduplicated verb root and *hid-* can be affixed with any verb ending. In the Aci dialect *hid-* is used much more frequently, indicating physical motion as well as

duration, and in a serial verb phrase it indicates habitual aspect. When marking habitual aspect, *hid-* can only have the immediate past tense endings. The frequency and variety of usages of *hid-* in the Aci dialect reflects a usage that is common in the Nend and Mum languages but not in the Aki dialect. Thus, the verb *hid-* is a likely source for the habitual suffix in Aci.

TABLE 9: FUTURE TENSE SUFFIXES IN APALI, NEND AND MUM

	Nend	Aki	Aci	Mum
FUT	*-dala*	*-ba*	*-d*	*-rmad*
IF	*-ŋ*	*-bal*	*-bal*	–

The sources of the differences between the future tenses of the Aki and Aci dialects are another difficulty. As can be seen in Table 9, the immediate future forms (actually called probable future in Nend) are identical in the Aki and Aci dialects though they are in no way cognate with the Nend. The regular future forms are, however, different in Aki and Aci. The Aki dialect is marked by the *-ba* suffix which is part of the form used also in the immediate future. The Aci dialect uses a *-d* suffix along with a different set of person/number markers. The future tense suffix in Aci is probably cognate with the Nend suffix *-dala* and with the future tense suffix in Mum which is basically *-rmad.* Mum, unlike Nend and Apali, only has one future tense. Given that Nend, Aci, and Mum have cognate future tense suffixes, then the source of the future tense suffix in the Aki dialect is unknown.

Finally, we should consider the major differences between the forms and usages of the same subject sequential markers in the two dialects. This marker is realized as *-vila* in the Aki dialect. In the Aci dialect the same subject sequential marker *-ca* occurs only on a limited number of verbs. In the Nend language the same subject sequential marker is *-e* and in the Mum language the marker is *-ta.* In Nend, Mum and Aki, the same subject sequential markers are present in almost every multi-clause sentence. The Mum and Aci same subject sequential markers are definitely cognate, but the origin of the Nend same subject sequential marker *-e* is harder to track down because the /e/ phoneme is not present in Mum and in Apali it is generally the result of a combination of /a/ and /i/.

Interestingly enough the form *hine* 'stay' is used in the Aci dialect as the same subject sequential medial form instead of the normal verb root forms *hini* or *hinia* as in the Aki dialect. The *hine* form in the Aci dialect or the *-a* transition vowel that is often added to verb roots in both dialects may be a reflection of the Nend same subject marker. The word *hine* 'stay' is also used as a sort of substitute same subject sequential marker with verb roots that don't accept *-ca.* The source of the *-vila* suffix in the Aki dialect is again unknown. There is nothing similar to it in the medial verb systems of either Mum or Nend.

4.4   Conclusions from grammatical evidence

Several interesting differences between the verb systems of the Aci and Aki dialects have been discussed in this section.   Roberts (1991:77-78) noted that there are grammatical differences between the dialects of the Amele language, but that these differences between the dialects could be traced to the influence of neighboring languages in the same language family which also had these features. In contrast with Amele, there are no easily traceable sources in the neighboring languages for all the differences between the Aki and Aci dialects. This is especially true for the future tense and the same subject sequential markers in the Aki dialect. These are unique among the three languages considered.

It is possible that some influence could have been felt from the languages to the south on the other side of the Ramu River, but the Ramu River has generally been a very formidable barrier for much regular contact, making borrowing unlikely. Also languages to the east could have had an influence on the dialect differences, but again there is very little contact with that area. Although borrowing from the south or east is unlikely, the convergence theory opens another possibility, that is, that the Aki dialect originated to the south or east as a separate language, with the people moving into their present area. In this case, the unique suffixes would be remnants from the original language. Unfortunately no data has been available to me from either the languages in the Aiome area to the south or the languages to the east to test this hypothesis. However, legends and clan patterns do support this hypothesis.

5   Evidence from Legends and Clan Patterns

Several years ago I recorded a legend about the early settlement of a Aci speaking village in the northwestern corner of that dialect area. According to this legend, the village began when a man and his daughter were driven out of their own village located further to the east (?) and came to their current area. When they arrived at their current territory, their fire died. Then they saw some smoke in the distance and went down to investigate. Thereafter follows a delightful account of two monolingual people trying to communicate about basics such as fire, food and times of day. The person who had fled from his home area was an Aci speaker and the person encountered was speaking the Hive language (their term for the Nend language). Eventually these two men learned to communicate, exchanged daughters as wives and made a village together. This legend and some of the customary practices mentioned in it are probably from 100 years or more ago since many of the practices mentioned ceased long before the time of the grandparents of the oldest living people.

One point that supports the truth of this account is that a part of the Aluji clan which is basically at the village of Usiheŋ in the Aci dialect area is also reportedly located in the

Nend speaking village of Italaŋku. This common linkage by clan may have been from a more recent connection between the villages, but at this time there are no marriages of the Nend speaking people with the people from the Usiheŋ area. Most marriages of Usiheŋ people are with the Mum language speakers to the north, Aki speakers to the west or other Aci speakers further to the east or south.

The legend also provides interesting information on the geographical limits of language groups. In the current situation, the Aci speakers in the northern part of the language group share no geographical boundaries with the Nend speaking people. They are separated by a large section of jungle that is inhabited by a cluster of Aki speaking villages. The first person encountered in the legend was a Nend speaker so it is highly probable that the area now inhabited by the Aki speakers was at that time inhabited by Nend speakers. In the current social situation, Nend speakers are rarely if ever found in the Aci speaking area.

The Aki dialect speakers live in a very small concentrated area that is squeezed between the Nend and Aci speakers as shown in Map 1. The Aki speaking community almost appears to be an intrusion into the area from the south and in fact it is only in the last 15 years that the Aki speakers have moved further north until some are living on the Sogeram River. All hamlets in the dialect area are within 1-2 hours walk of each other and there is much interaction between the hamlets. Because of this close geographical proximity and intense interaction the variations among the speakers of the Aki dialect are relatively minor, though they are increasing due to the fact that some hamlets are more rapidly incorporating Aci words into their own dialect.

The Aci dialect speakers in contrast are spread out over a very large geographical area with an average of 3-4 hours walk between each hamlet. Partially because of their dispersion over a large area with a major river dividing the area, the dialect variation between hamlets is very great and is seemingly becoming greater.

These differences in dialect variation between the Aki and Aci areas can be accounted for in terms of settlement patterns. Anderson (1973:82) comments that "...if we have a large area only a small part of which is broken up into marked dialect differentiation, the large homogeneous area has only recently been settled." Applying this to the situation in Apali suggests that the Aci dialect represents a section of the language that has been settled for a much longer time allowing for more divergence whereas the Aki dialect represents a more recent movement of people into the area.

6   Summary

After examining the phonological and grammatical data from the Aci and Aki dialects it is easy to see that these two dialects are currently one language and are distinctly different

from the two neighboring languages they interact with on a daily basis. The phonological differences between the dialects are not in the actual phonemes available in the languages. Rather the differences are seen in the allophones and relative frequency of these phonemes. The Aci dialect like the Mum language tends to use stops rather than fricatives. The Aci dialect also has dental stops which are present only in Nend and not in Mum or Aki. These differences alone are inconclusive and could probably be explained by means of dialect divergence.

The grammatical differences are harder to explain. As in the phonological system, most grammatical features are similar if not identical, but some of the most frequently used forms – future tense, habitual aspect and the same subject sequential marker – are totally different. After examining these differences in light of neighboring languages it can be seen that the Aci dialect often has forms similar to Nend or Mum or both and that the Aki dialect is often left with the odd form that doesn't match anything else.

When the phonological and grammatical differences are compared with information collected from legends, the possibility arises that the speakers of the Aki dialect represent a relatively recent migration into the area. Given the current rate of vocabulary changes and the ever increasing use of the Aci dialect, it is a distinct possibility that there has been a major convergence of two languages that resulted in the formation of the Apali language with its two distinct dialects. Thus language convergence rather than dialect divergence may be the source of the current differences between the Aki and Aci dialects.

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Appendix 1: Examples of correspondences

	Aki	Aci	
/x/ - /k/	/xulaŋ/	/kulaŋ/	'man'
	/xɨlihu-/	/kiliku-/	'put crosswise'
/x/ - /tʃ/	/ximaŋ/	/tʃimaŋ/	'coconut'
	/xiβi/	/tʃiβi/	'untie'
/β/ - /p/	/tʃiβali/	/tʃipali/	'bamboo type'
	/βali/	/pati/	'dead body'
/l/ - /t/	/limi/	/timi/	'stick'
	/mili/	/miti/	'cough'

Appendix 2: Mum Phonemes

b	d		g	ŋgw
p	t		k	kw
v			h	hw
	nz			
	s			
m	n	ɲ	ŋ	
	r			
j			w	

	i		u
		ɨ	
		a	

Appendix 3: Nend Phonemes

b	d		g	ŋgw
p	t		k	kw
v	z	dʒ	h	
	s	tʃ		
m	n	ɲ	ŋ	kŋ (?)
	l			
j			w	

	i		u
	e	ɨ	o
		a	

Appendix 4: Conjugations of -*n* 'eat'

		Akɨ	Aci	Mum	Nend
IP	1s	*nin*	*nin*	*ɲin*	*nin*
	2s	*ninaŋ*	*ninaŋ*	*ɲana*	*nan*
	3s	*ni*	*ni*	*ɲi*	*ni*
	1p	*nalu*	*nalu*	*ɲariŋ*	*naliŋ*
	2p	*nilaŋ*	*nilaŋ*	*ɲara*	*namgin*
	3p	*navi*	*navi*	*ɲayu*	*namgi*
TP	1s	*niemin*	*naiemin*	–	*nadinin*
	2s	*nieminaŋ*	*naieminaŋ*	–	*nadinan*
	3s	*niemi*	*naiemi*	–	*nadini*
	1p	*niemilu*	*naiemilu*	–	*nadinaliŋ*
	2p	*niemilaŋ*	*naiemilaŋ*	–	*namgidigin*
	3p	*naviemi*	*naviemi*	–	*namgidigi*
YP	1s	*nimalamin*	–	*ɲasin*	*nemen*
	2s	*nimalaminaŋ*	–	*ɲasna*	*neman*
	3s	*nimalami*	–	*ɲasr*	*nemil*
	1p	*nimalamilu*	–	*ɲasiriŋ*	*nemoliŋ*
	2p	*nimalamilaŋ*	–	*ɲasra*	*namgeman*
	3p	*navimalami*	–	*ɲasyu*	*namgemil*

FP	1s	nacin	nacin	ɲasmin	nen
	2s	nahanaŋ	nahanaŋ	ɲasmana	naɲ
	3s	nali	nali	ɲasmi	nal
	1p	nahilu	nakilu	ɲasmariŋ	noliŋ
	2p	nahilaŋ	nahalaŋ	ɲasmara	namgan
	3p	navali	navali	ɲasmu	namgil
HP	1s	namin	namadin	ɲamin	namanjin
	2s	namanaŋ	namadinaŋ	ɲamana	namadin
	3s	nami	namali	ɲami	namal
	1p	namilu	namadilu	ɲamariŋ	namadiliŋ
	2p	namilaŋ	namadilaŋ	ɲamara	namgimadin
	3p	navimi	navimali	ɲamu	namgimal
HP HB	1s	nadamin	–	–	nanjin
	2s	nadaminaŋ	–	–	nadin
	3s	nadami	–	–	nanj
	1p	nadamilu	–	–	nadiliŋ
	2p	nadamilaŋ	–	–	namgimadin
	3p	navihadami	–	–	namganj
HB	1s	nilan	nahidi	ɲadin	najin
	2s	nilanaŋ	nahidanaŋ	ɲadana	nalin
	3s	nilali	nahidi	ɲadi	naj
	1p	nilalu	nahidalu	ɲadariŋ	naliliŋ
	2p	nilalaŋ	nahidalaŋ	ɲadara	namgilin
	3p	navilali	nahidavi	ɲadu	namgij
PR	1s	nadin	nadin	–	nanibilin
	2s	nadanaŋ	nadanaŋ	–	nanibilan
	3s	nadi	nadi	–	nanibili
	1p	nadalu	nadalu	–	nanibilaliŋ
	2p	nadalaŋ	nadalaŋ	–	namgibilan
	3p	navadi	navadi	–	namgibili
IF	1s	nibalin	nibalin	–	naɲin
	2s	nibalinaŋ	nibalinaŋ	–	naŋan
	3s	nibali	nibali	–	naɲinj
	1p	nibalilu	nibalilu	–	naŋaliŋ
	2p	nibalilaŋ	nibalilaŋ	–	namgiŋan
	3p	nibalihavi	nibalihavi	–	namgiŋinj

FUT	1s	*niben*	*nidaŋ*	*ɲirman*	*nadaliɲ*
	2s	*nibanaŋ*	*nidinaŋ*	*ɲirmana*	*nadalan*
	3s	*nibali*	*nidi*	*ɲirmad*	*nadali*
	1p	*nibalu*	*nidilu*	*ɲimdaŋ*	*nadalaliŋ*
	2p	*nibalaŋ*	*nidilaŋ*	*ɲirmadra*	*nadalamgin*
	3p	*navibali*	*navidi*	*ɲirmadyu*	*nadalamgi*
IMP	1s	*niliŋ*	*niliŋ*	*ɲitin*	*naŋ*
	2s	*niha*	*nika*	*ɲa*	*nab*
	3s	*nam*	*nam*	*ɲam*	*naz*
	1p	*nimili*	*nimili*	*ɲim*	*nam*
	2p	*nihalaŋ*	*nikalaŋ*	*ɲamara*	*nabal*
	3p	*navim*	*navim*	*ɲamu*	*namgiz*
PRO	1s	*nimagaŋ*	*nimagaŋ*	*ɲitin*	*namiɲ*
	2s	*niminaŋ*	*niminaŋ*	*ɲina*	*namin*
	3s	*nimidi*	*nimidi*	*ɲiti*	*naminj*
	1p	*nimagalu*	*nimagalu*	*ɲitiriŋ*	*namiliŋ*
	2p	*nimilaŋ*	*nimilaŋ*	*ɲitra*	*namgimin*
	3p	*navimidi*	*navimidi*	*ɲitu*	*namgiminj*
CON	1s	*navin*	*navin*	–	*namiɲ*
	2s	*navanaŋ*	*navanaŋ*	–	*namin*
	3s	*navi*	*navi*	–	*namil*
	1p	*navilu*	*navilu*	–	*namiliŋ*
	2p	*navilaŋ*	*navilaŋ*	–	*namgimin*
	3p	*navivi*	*navivi*	–	*namgimil*
DS	1s	*niliŋ*	*niliŋ*	*ɲahin*	*naŋ*
	2s	*ninaŋ*	*ninaŋ*	*ɲahana*	*nan*
	3s	*nici*	*nici*	*ɲahi*	*naz*
	1p	*nimili*	*nimili*	*ɲahariŋ*	*naliŋ*
	2p	*nilaŋ*	*nilaŋ*	*ɲahara*	*namgin*
	3p	*navici*	*navici*	*ɲahu*	*namgiz*
SS		*navila*	*ca* (*hine*)	*ɲata*	*ne*