

## A Phonological Comparison on Akha and Hani

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The main material for the study of Hani has been the wordlist provided by Hú/Dài in 1964, used extensively by David Bradley in his "Akha and Southern Loloish" and "Proto-Loloish". Recently some more material on Hani became available to me, consisting of a Hani-Chinese Wordlist, Kunming, 1959, 108 p., and a tape-recording of 288 Hani words, spoken by a Hani from Lù-chūn, Yünnan<sup>1</sup>. The wordlist, entitled in Hani: Haqniq pyulniul soqmiav niq pyu hu zzaol e nilgevnei soqhhavq, and in Chinese: 哈 汉 对 照 小 詞 彙 (A Short Hani-Chinese Vocabulary), consists of around 1900 lexical items written in a Hani transcription and translated into Chinese, with characters and transcription into pīn-yīn. The book gives no further information as to what kind of Hani it is, but comparing it with the tape, Hú/Dài, and the article by Lǐ-Yōng-suí, 1979, it is obviously the Lù-chūn dialect, chosen as a standard Hani. More than 10 % (219 items) of the wordlist consists of recent Chinese loanwords. I have compared this wordlist with the main dialect of Akha spoken in Thailand and Burma based mainly on my own files from Thailand, but also on Lewis, 1968, from Burma. The cognates, around 600 (not counting syllables that occur in several compounds) are listed in Appendix 1. The transcription system of Hani in the wordlist is very close to pīn-yīn, as e.g. b-, d-, g- stand for [p], [t], and [k], q- for [tjh], c- for [tsh], h- for [xh]. The voiced stops are written bb-, dd-, and gg- respectively. See App. 2 for a conversion table of written Hani (WrHa) from the wordlist to the Akha transcription system described e.g. in "An Akha Conversation on Death and Funeral", 1974, and "Sound Changes in Akha", 1979. The tones in Hani are spelt with letters as follows: in non-laryngealized syllables High tone -l, Mid tone -zero, Low tone -q, in laryngealized syllables Mid tone -v, Low tone -vq. In the summaries from the cognate list below, I give after each written Hani form the phonetic form, within square brackets, using the Akha transcription system for those words

1) The tape recording was made by professor Søren Egerod, University of Copenhagen, in Kunming, March 1981, and he also got a copy of the Hani-Chinese wordlist. I thank him for letting me use this material.

are on the tape, i.e. for spoken Hani (SpHa). I also write the phonetic transcription after the written Hani, when discussing Akha/Hani cognates.

Below I give examples of each Akha final and initial with their Hani correspondences choosing, where possible, words that are on the tape. See §. 1 for further examples.

### ALS

The finals of Akha and Hani are as follows:

a

	Front		Central		Back	
	Unr.	Round			Unr.	Round
h	i	ü			y	u
l	e	ö			ə	o
v	ɛ		a			ɔ
sal	m					aŋ

ni

	Front		Central		Back	
	Unr.	Round			Unr.	Round
h	i~ii [i]				ee~i [y]	u [u]
l		yu [ö]			e [ə]	o [o]
v	ei [ɛ]		a [a]			ao [ɔ]

Apart from the Akha back nasalized vowel -aŋ, all occur in both non-laryngealized and laryngealized syllables.

The tonal system is the same for Akha and Hani and is marked as follows:

-laryngealized:                   Akha                   Hani

h	'	-l
l	zero	zero
v	'	-q

+laryngealized:

h	-q	-v
v	-q	-vq

According to the Hani Wordlist (and Lǐ Yōng-suī) there is another tone, rising 35, marked with -f, but only used for pronouncing recent Chinese loanwords with falling tone. These loanwords won't be considered here.

For each final I give first the non-laryngealized and then the laryngealized correspondences.

### Ak -a / Ha -a [a]

	Ak	WrHa	SpHa
road	gá-ma	ggalma	[gá ma]
I	ŋá	ŋgal	[ŋá]
eat	dzà	zraq	[dzà]
sick	ná	nal	[ná]
heart	ny- <u>ma</u>	ne <u>ema</u>	[ny <u>ma</u> ]
tiger	xhà-là	haqlaq	[xhà là]
meat	sjhà	saq	[shà]
wife	mî- <u>zà</u>	mi <u>qssaq</u>	[mî <u>zà</u> ]
bird	ădji'	<u>al</u> zziil	[ădzi']

Ak -a so far always corresponds to Ha -a [a]. There are a few differences in tone between the Hani words on tape and their spellings in the wordlist, which might be a question of sandhi. In those cases Akha, when there is a cognate, goes with the written Hani. E. g.

	Ak	WrHa	SpHa
beautiful	djà	<u>z</u> zaqqulnei	[gà <u>d</u> za nɛ]

The word in the wordlist sometimes differs from the one on tape. Note also the difference in initial. Akha merges dj-/dz-. See below under initials.

	Ak	WrHa	SpHa
wind	djà-1ɛ	jjaqleil	[dja 1ɛ]
left (hand)	tjhá	jjaqqal	[dja tjhá]
right "	làq má	jjaqmal	[dja má]

In these three examples written LOW has changed to MID before HIGH.  
NB Akha also LOW in 'wind'. No cognate to WrHa jjaq.

	Ak	WrHa	SpHa
river	lɔ̄-bà	lol <u>bb</u> aq	[ló <u>ba</u> ]
liquor	dží-bà	zziil <u>bb</u> aq	[dží <u>ba</u> ]
day after tomorrow	shá-phɛ	salpeiqnao	[shá <u>phe</u> ]
listen	ná-hà	nalhaq	[ná <u>xha</u> ]

Hani HIGH + LOW > HIGH + MID. No change in Akha. This is a regular sandhi rule for Hani according to Li's article, but there are too few examples on tape (and the ones that are there aren't always in agreement with Li's rules) to warrant a comparison with Akha.

### Ak -aq / Ha -av [aq]

	Ak	WrHa	SpHa
have, be (inanimate)	djaq	jjav	[djaq]
eye	mjaq	miav	[mjaq]
pig	àzàq	aqhhavq	[àγàq]
hand	àlàq	aqlavq	[àlàq]

Regular correspondence Ak -aq / Ha -av. In a few cases it is difficult to hear the laryngealization on tape:

	Ak	WrHa	SpHa
deep	nàq	navqyolnei	[nà jó nɛ]
black	naq	nav	[ná tjoq nɛ]
finger	jàq nö	lavqnyul	[là(q) nö]

It could be that in Hani the laryngealization disappears, or weakens, in close juncture.

### Ak -i / Ha -i [i], ([ɔ])

	Ak	WrHa	SpHa
ride	dží	zziq	[džɔ̄]
small	njí	nil	[njí]
one	thí	qiq	[tjhí]
grandmother	àphí	aqpinq	[àphí]
cat	ámí	almil	[ámí]

Ak - i / Ha - ii [i]

	Ak	WrHa	SpHa
bird	<u>ádjí</u>	<u>alzzii</u> l	[ádzí]
die	<u>sjhí</u>	<u>siil</u>	[shí]
fruit	<u>áshí</u>	<u>alsiiq</u>	[áshí]

Ak - iq / Ha - iv [iq], [yq]

	Ak	WrHa	SpHa
seven	<u>sjìq</u>	<u>sivq</u>	[sìq]
goat	<u>tjìq-mjèq</u>	<u>aqzivq</u>	[àtsìq~àtjìq]
give	<u>bìq</u>	<u>bbivq</u>	[bìq]

Ak - iq / Ha - iiv [iq]

	Ak	WrHa	SpHa
firm	<u>zìq</u>	<u>ssiivq</u>	÷

In WrHa the final -ii [i] can only occur after the initials c- [tsh] , zz- [dz] , s- [sh] , ss- [z] in open syllables, and after the initials z- [ts] , zz- [dz] , s- [s] , ss- [z] in closed syllables. After these initials the final [-y] is spelt -i . See examples below under Ak - y / Ha - ee/-i . Note though that the word 'ride' on the tape is pronounced more as [dzà] than [dzy]. There is also a problem with 'goat', which should be pronounced [tsìq] according to the spelling, but on tape sounds like something inbetween [tsìq] and [tjìq].

Ak - u / Ha - u [u]

	Ak	WrHa	SpHa
youngster	<u>zà-gù</u>	<u>ssaqguq</u>	[zà gù]
fat, plump	<u>tshú</u>	<u>cul</u>	[tshú]
stand up	<u>thú</u>	<u>tul</u>	[thú]
head	<u>ù-dù</u>	<u>wuqdduq</u>	[ù dù]
silver	<u>pjhú</u>	<u>piul</u>	[pjhú]
soul	<u>shú-lá</u>	<u>sullal</u>	÷

Ak -uq / Ha -uv [uq]

	Ak	WrHa	SpHa
afraid	guq	gguv	[guq]
water	i- <u>tjùq</u>	wuljuv <u>q</u>	[ú <u>tjuq</u> ]
sleep	jùq	yiuvq	[jùq]
egg	ja- <u>uq</u>	a <u>lwuv</u>	[á <u>uq</u> ]

See below for Ak -o / Ha -u. The pronunciation of 'water' is, as far as I can hear on the tape, MID and not LOW as the Hani spelling. Akha has a LOW tone though. The medial -i- in the Hani spelling of 'sleep', yiuvq, is there to differentiate it from [o], which Hani writes as -yu. Cf 'four', Ha yuvq [ôq]. Ak ô. Ha -u with zero initial is written wu, always pronounced [u].

There are a few irregular correspondences:

	Ak	WrHa	SpHa
thatch	ù djí	eqjjil	[è djí]
cowrie	hú-shí	helsiiq	÷
who	àshú	aqsol	[àshú]

WrHa -e is usually pronounced [ə]. 'Cowrie' is not on tape, but is presumably pronounced [xhé shí]. I can't see why 'who' in Hani is written aqsol, as it is clearly pronounced [àshú]. Cf. also Ha neesoq [ny shù] 'tomorrow', Ak ny-sjhò, but Ha soqhavq [shò γàq], Ak shè-γà 'paper'. There is a possible written syllable 'su' in Hani, as e.g. 'soul' Ha sullal, Ak shú-lá (Lewis), or shá-lá. This syllable is unfortunately not on tape but is probably, in analogy with all the others, pronounced shú.

Ak -e / Ha -ei [ɛ]

	Ak	WrHa	SpHa
ten	tshé	ceil	[tshɛ]
sound, voice	thé	ddoqteil	[dò <u>thɛ</u> ]
hawk, eagle	xhà- <u>dzé</u>	haqzzeil	÷

Ak -e / Ha -i [i]

	Ak	WrHa	SpHa
husband	xhà- <u>dzé</u> -zà	huljjil	[xhú <u>djí</u> ]
thunder	m <u>djè</u> <u>djè</u>	aoqjjiq	[ò <u>djí</u> ]
red	né	nil	[ní]
bamboo strip	ánè	a <u>lniq</u>	÷

-ɛ, especially after affricates and dento-palatals. No cognate for Ak -eq, which occurs very rarely anyway. Cf. also WB 'red' ni, 'bamboo strip' hn̄i.

Ak -o / Ha -u [u]

	Ak	WrHa	SpHa
water buffalo	<u>njò</u> phý	<u>niuq</u> peel	[njù phý]
rat	<u>ho</u> -tjàq	<u>huzav</u> q	[xhú tsàq]
ant	<u>áho</u>	<u>alwuv</u> lalddeiq	÷
father's sister	<u>àxhò</u>	<u>aqh</u> uq	÷
walk	zò	<u>ssu</u> q	[zù]

Ak -o / Ha -o [o]

	Ak	WrHa	SpHa
tall	gó	ggòq	[gò]
boy	<u>zà</u> - <u>jo</u>	<u>ssaq</u> yo	[zà jo]

Ak -o / Ha -yu [ö]

	Ak	WrHa	SpHa
chew	γò	hhyuq	÷

In Akha, the syllable 'ho' in various names for rodents and ants also occurs in the form xho~xoq. Note also that the Ak initial h- can't occur in laryngealized syllables. The word for 'stone', Ak xhà-lo, Ha havqluv [xàq luq], has a difference in phonation type. Cf. LTSR No. 190, which reconstructs variant forms for PLB: \*k-lok~\*k-loŋ. 'Tall' is HIGH in Akha but clearly on tape LOW in Hani. 'Chew' is the only example of Ak -o / Ha -yu [ö]. The word is not on tape. Ha -yu [ö] regularly corresponds to Ak -ö. See below.

Ak -oq / Ha - uv [uq]

	Ak	WrHa	SpHa
six	kòq	guvq	[kùq]
write	bòq	bbuvq	[bùq]
year	xòq	huvq	[xùq]
return	<u>γòq</u> ~òq	hhuvq	[γòq lá]

The pronunciation of 'return' in Hani is irregular according to its spelling - or spelt wrongly!

Ak -oq / Ha -ov [oq]

	Ak	WrHa	SpHa
make a fire	dòq	ddovq	÷
door	<u>yoq</u> -xhè~ oq-xhè	<u>hhohei</u> q	÷

'Door' is not laryngealized in Hani.

Ak -ε / Ha -ei [ɛ]

	Ak	WrHa	SpHa
melon	má- <u>dε</u>	mal <u>ddei</u>	[má <u>dε</u> ]
shirt, clothes	<u>phε</u> -xhàŋ	<u>peilhao</u> q	[ <u>phε</u> xhɔ̄]
nose	<u>ná</u> -mε	<u>nalmei</u> l	[ná <u>mε</u> ]
teach	mè	meiq	[mè]
louse	<u>sjhε</u> -mó	seil	[shε]
ashes	xhà- <u>lε</u>	haq <u>leil</u>	[xhà <u>lε</u> ]

Ak -ε regularly corresponds to Ha -ei [ɛ]. Of the words on tape (27 ex.) a few Ha -ei are pronounced [ə]: 'forehead' Ha wuqddeiq [ù də] ; 'rain' Ha aoqsseil [ò zə] or [ò zá zá], both pronounciations of tape, cf Ak ù jε jε . Another exception is 'forget', Ak ηε, Ha nieiljav [ní dzà].

Ak -εq / Ha -eiv [eq]

	Ak	WrHa	SpHa
hungry	mèq	meivq	[mèq]
blossom	jεq	yiev	[ájèq]
eight	jèq	xεivq	[sjèq]
take off, undress	lεq	leiv	[lεq]

The Hani word for blossom, on tape [ájèq], is probably spelt wrongly in the wordlist, which can be seen from the alphabetization. Should be yeiv. 'Drunk' is spelt in Hani yevq but on tape pronounced [jèq] as Ak jèq.

### Ak - o / Ha - o [o]

	Ak	WrHa	SpHa
fast, quick	khó	kol	[khó]
person	tshó-hà	col	[tshó]
drink	dó	ddol	[dó]
you (sing.)	nó	nol	[nó]
ear	nà-bó	naq <u>bbol</u>	[nà bó]
old	mò	moq	[mò]
river	ló-bà	lol <u>bbaq</u>	[ló ba]

### Ak - o / Ha - ao [ɔ̄]

	Ak	WrHa	SpHa
dò-mi	ddaoqmiq	[dò mi]	
fly <i>ing</i> squirrel	ho-bjɔ~	hubbiaol	÷
	xho-bjɔ		
thing	mjò	miaoqggaoq	[mjò gò]
bridge	ló dzm̍	laolzzaol	÷
stomach	bɔ-ma	bbaoma	÷

### Ak - o / Ha - u [u]

	Ak	WrHa	SpHa
see	ho	hu	xhú

### Ak - o / Ha - yu [ȫ]

	Ak	WrHa	SpHa
broom	jaq-pjhó	yav <u>pyul</u>	÷
face	mjaq-pjhò	miav <u>pyuq</u>	÷
side, direction	pho	pyu	phö

The regular correspondence is Ak - o / Ha - o [o]. Ha - ao goes mainly with Ak - aŋ and -in. An exception is 'be, exist' Ak djó, WrHa jjol, but on tape [djú]

### Ak - oq / Ha - ov [oq]

	Ak	WrHa	SpHa
lungs	sjhà-pòq	bovq	[pòq]
dry in sun	lòq	lovq	[lòq]
tie	pàq tòq	bav <u>qdo</u> vq	÷
want to	mòq	movq	÷
ripe	òq	ovq	÷

Ak - oq / Ha - aov [oq]

	Ak	WrHa	SpHa
sandals	shɛ- <u>nɔq</u>	seivqnaov	÷

Regular correspondence Ak - oq / Ha ov [oq].

Ak - y / Ha - ee [y]

	Ak	WrHa	SpHa
foot	àkhý	aqkeel	[àkhý]
dry (trans.)	gy	ggee	[gy]
heart	<u>ny</u> -ma	<u>neema</u>	[ny ma]
good	mý	meeq	[mý]

Ak - y / Ha - i [y]

	Ak	WrHa	SpHa
stick, switch	dá- <u>tjhý</u>	ddal <u>cil</u>	÷
gold; yellow	sjhý	sil	[shý]
leopard	xhà- <u>zý</u>	hhaq <u>ssiq</u>	÷

The sound -y is always written -i after these Hani initials. Cf. -i above. In two cases Ha - ee sounds more like [ə] than [y]: 'star' aqggeelalsiiq [àgá áshi], and 'big' heeq [xhà~xhý]. It's difficult to tell from the tape.

Ak - yq / Ha - eev [yq]

	Ak	WrHa	SpHa
soak	dyq	ddeev	÷
seed, kernel/bean	ányq	<u>neevsiiq</u>	[nyq shí]

Ak - yq / Ha - iv [yq]

	Ak	WrHa	SpHa
joint	átsýq	alzivq	÷
itch	dzyq	zziv	÷
new	sjýq	sivq	[jó sýq]

These Hani initials can't be followed by -eov. Cf. -i above. 'Elder sibling' Ak àjýq, Ha aqyivq seems to be an exception. Cf. 'go' Ak í, Ha yil. Neither of these words are on the tape but they are presumably pronounced [iq] and [í] respectively. There is no WrHa yee or yeov though, but these syllables are also extremely rare in Akha.

Ak -ə / Ha -e [ə]

	Ak	WrHa	SpHa
carry on back	ə	eq	÷
rotten	phə	peq	÷
strawhat	lò-hə	leqhe	÷
charcoal	xhà-γə	haqhheq	[xhà γə]
tooth	shə	seq	[shə]
lead (by hand)	sjhə	seq	[shə]

Ak -ə / Ha -ee [y]

	Ak	WrHa	SpHa
be	ŋə	ngeel	[ŋy]

Only this ex. of Ak -ə / Ha -ee [y]. Another exception is 'dew' Ak tjhə, Ha ciiqhaq, which is not on tape.

Ak -əq / Ha -ev [əq]

	Ak	WrHa	SpHa
arrive, reach	kəq	hev	[xəq]
pheasant	gəq	ggevq	÷
change, become	pjəq	bievq	÷
shoot	bəq	bbev	÷

This correspondence is entirely regular.

Ak -ö / Ha -yu [o]

	Ak	WrHa	SpHa
cry, weep	ŋö	ngyl	[ŋö]
finger	làq-nö	lavqnyul	[làq nö]
lazy, bad	dö	ddyul	[dö]
bone	sjhà-jö	saqyyuq	[shà jö]
nine	γö	hhyuq	[γö]

This is the regular correspondence. But note the following exceptions:

	Ak	WrHa	SpHa
horn	tjhö	kyul	[khui]
intelligent	tjhö	kyul	÷
able	tjhö	qaol	÷
sweet	tjhö	qu1	÷

	Ak	WrHa	SpHa
belt	<u>dzò</u> -dzàŋ	jjuqzzaoq	÷
green	njó	niul	÷

WB has khruim~khyui 'horn', khyui 'sweet'. Ha -u otherwise mainly goes with Ak -u or -o, and Ha -ao with Ak -aŋ or -m.

### Ak -m / Ha -ao [ɔ]

	Ak	WrHa	SpHa
work	m̄	aol	[ɔ̄]
heaven	ṁ	aoq	[ɔ̄]
fence	khm̄	<u>kaoldaol</u>	÷
wear (clothes)	dm̄	ddao	[dɔ̄]
bowl	xhm̄-mā	<u>haoqmaq</u>	÷
iron	sjh̄m̄	saol	[shɔ̄]
three	sh̄m̄	saol	[shɔ̄]
warm	l̄m̄	laol	÷

So far no exceptions. No cognates with Akha laryngealized -mq.

### Ak -aŋ / Ha -ao [ɔ̄]

	Ak	WrHa	SpHa
sell	àŋ	aoq	[ɔ̄]
hair (on head)	tshé <u>kháŋ</u>	<u>ceilkaol</u>	[tshɛ́ khɔ̄]
liver	sjhà- <u>tshàŋ</u>	caoq	[tshɔ̄]
thousand	tháŋ	taol	[thɔ̄]
day	naŋ	nao	[nɔ̄]
name	tshó <u>mjáŋ</u>	<u>colmiaol</u>	[tshó <u>mjɔ̄</u> ]
shirt, clothes	phɛ́- <u>xháŋ</u>	<u>peilhaoq</u>	[phɛ́ <u>xhɔ̄</u> ]

Almost entirely regular. A few exceptions: 'horse' Ak màŋ, Ha moq [mó]; 'long' Ak máŋ, Ha mol; 'nest, hole' Ak bàŋ, Ha bbeeq, but 'clf. for hollow things, rainfall' Ak bàŋ, Ha bbaoq. Note 'shirt, clothes', where Hani has a HIGH tone on the tape on [xhɔ̄], but it is spelt with a LOW tone. This final does not occur laryngealized in Akha. -

## SUMMARY OF AKHA/HANI FINALS

### Non-laryngealized syllables:

Akha	Hani
-a	-a [a]
-i	all initials but Ha c-, zz-, s-, ss-
-i	only after Ha c-, zz-, s-, ss-
-u	-u [u] (-e [ə], -o [u])
-e	{ -ei [ɛ] -i [i]
-e	not conditioned by initial
-o	-u [u] (-o [o], -yu [ö])
-ε	-ei [ɛ] ([-ə], [-i])
-ɔ	{ -o [o] (-u [u], -yu [ö]) -ao [ɔ]
-ɔ	not conditioned by initial, ɔ>o most frequent
-y	{ -ee [y] ([-ə]) -i [y]
-y	all initials but Ha c-, zz-, s-, ss-
-y	only after Ha c-, zz-, s-, ss-
-ə	-e [ə] (-ee [y])
-ö	-yu [ö] ([-ui], -ao [ɔ], u [u])
-m	-ao [ɔ]
-aq	-ao [ɔ] (-o [o], ee [y])

### Laryngealized syllables:

Akha	Hani
-aq	-av [-aq]
-iq	all initials but Ha z-, zz-, s-, ss-
-iq	only after Ha z-, zz-, s-, ss-
-uq	-iv [-iq]
-eq	-iiv [iq]
-oq	-uv [uq]
-εq	No cognate
-ɔq	-uv [uq] ([oq], -ov [oq])

**Akha**

	Hani
-yq	all initials but Ha z-, zz-, s-, ss-
-yq	only after Ha z-, zz-, s-, ss-
-əq	
-öq	No cognate

Akha has 13 finals, while Hani has only 9. As can be seen from the tables above (see also p. 2) Akha has a three-way distinction in the front unrounded vowels, and Hani has only two. Ak -e goes either with Ha -ei [ɛ] or -i [i]. Ak -ü is very rare and I have so far no cognates. That sound doesn't seem to exist in Hani. Ak -ö, -y, -ə, and -a have, with a few exceptions, a one-to-one correspondence with Hani. Hani has no final nasals, and Ak -m and -aŋ have merged to -ao [ɔ] in Hani. The Akha back rounded vowels correspond to a vowel one step higher in Hani: Ak -aŋ>Ha -ɔ, Ak -ɔ>Ha -o, Ak -o>Ha -u, Ak -u>Ha -u.

INITIALS**Akha**

k kh g ŋ  
ts tsh dz  
tj tjh dj  
t th d n  
pj pjh bj mj  
p ph b m  
h x xh γ  
sj sjh s sh  
j z l

**Written Hani**

g k gg ng  
z c zz  
j q jj  
d t dd n  
bi pi bbi mi  
b p bb m  
÷ h h hh  
x x s s  
y ss l

**Spoken Hani**

[k kh g ŋ]  
[ts tsh dz]  
[tj tjh dj]  
[t th d n]  
[pj pjh bj mj]  
[p ph b m]  
[÷ x xh γ]  
[sj sjh s sh]  
[j z l]

In both Akha and Hani initial voiceless consonants are always aspirated in non-laryngealized syllables, and non-aspirated in laryngealized ones.

Ak kh- / Ha k- [kh] (Open syllables)

	Ak	WrHa	SpHa
crab	ákha	alka	÷
call on	khú	kul	÷
fast, quick	khó	kol	[khó]
foot	àkhý	aqkeel	[àkhý]

fence	Ak kh- / Ha x- [χ]	WrHa <u>khm</u> tshé- <u>kháŋ</u>	SpHa ÷ [tshɛ̄ <u>khɔ̄</u> ]
hair on head			
Ak l- / Ha x- [χ] (Open)			
mosquito net	Ak	WrHa	SpHa
heavy	by- <u>kha</u>	bbee <u>xə</u>	÷
	khaŋ	xao	[sjhɔ̄]
Ak k- / Ha g- [k] (Closed)			
comb, harrow	Ak	WrHa	SpHa
six	kaq	gav	÷
bite	kòq	guvq	[kùq]
box	kòq	govq	÷
	bàŋ- <u>kəq</u>	bbaoqgev	÷
Ak k- / Ha h- [χ] (Closed)			
arrive	Ak	WrHa	SpHa
	kəq	hev	[xəq]
Ak g- / Ha gg- [g] (Open)			
road	Ak	WrHa	SpHa
child	gá- <u>ma</u>	ggalma	[gá ma]
mosquito	zà- <u>gù</u>	ssaq <u>ggua</u>	[zà gu]
brass	tjhó- <u>gò</u>	yal <u>ggoo</u>	[já gu]
clear water	gì	ggee <u>q</u>	[gì]
	gáŋ	eel <u>ggaol</u>	÷
Ak g- / Ha gg- [g] (Closed)			
feel cold	Ak	WrHa	SpHa
afraid	gaq	ggav	÷
bedbug	guq	gguv	[guq]
pheasant	àgɔq	aq <u>ggov</u>	÷
	gòq	gge <u>vq</u>	÷
Ak n- / Ha ng- [ŋ] (Open)			
I	Ak	WrHa	SpHa
be	ŋá	ngal	[ŋá]
cry, weep	ŋá	ngeel	[ŋȳ]
	ŋó	ngyul	[ŋó]

Ak η- / Ha ni- [n?] (Open)

	Ak	WrHa	SpHa
frost	ηε	haqnieil	÷
forget	ηε	nieiljav	[ni̥]

Ha ni- normally corresponds to Ak nj- and is also pronounced [nj]. See below. On the tape 'forget' is pronounced [ni̥] in spite of the spelling. As 'frost' is not on the Hani tape, the problem can't be solved yet.

Ak tsh- / Ha c- [tsh] (Open)

	Ak	WrHa	SpHa
earth	mī-tshà	milcaq	÷
wash	tshî	ciiq	[tshî]
fat, thick	tshú	cul	[tshú]
ten	tshé	ceil	[tshε̥]
plow	tshè	ceiq	÷
person	tshó-hà	col	[tshó]
cough	tshô	cyuq	÷
crossroad	gá-tshm̄	ggalcaol	÷
liver	sjhà-tshàn̄	caoq	[tshò̥]

Ak tsh- / Ha q- [tjh] (Open)

	Ak	WrHa	SpHa
shed, shack	já-tshm̄	xalqaol	÷

Ak ts- / Ha z- [ts] (Closed)

	Ak	WrHa	SpHa
connect	tsaq	zavq	÷
rice ball	hò tsuq	hoqzuv	÷
build	tsoq	zuv	÷
cold	tsɛq	zeivq	÷
joint	átsyq	alzivq	÷
pick, pluck	tsəq	zev	÷

Cf. below Ak tj- / Ha z-.

Ak dz- / Ha zz- [dz] (Open)

	Ak	WrHa	SpHa
eat	dzà	zzaq	[dzà]
ride	dzi	zziq	[dzə̄]
sit on heels	dò <u>dzú</u> <u>dzú</u>	ddaoq <u>zzulzzul</u>	÷
kick	xhà- <u>dzé</u>	haq <u>zzeil</u>	÷
left over	dzè	a <u>qzzeiq</u>	÷
fool, idiot	àdzò	a <u>qzzoq</u>	÷
belt	dzô- <u>dzàŋ</u>	jjuq <u>zzaoq</u>	÷
bridge	ló- <u>dzm̄</u>	laol <u>zzaol</u>	÷
a bundle	dzàŋ	zzaoq	÷

Ak dz- / Ha zz- [dz] (Closed)

	Ak	WrHa	SpHa
a drop	dzaq	zzav	÷
itch	dzyq	zziv	÷

Ak tjh- / Ha q- [tjh] (Open)

	Ak	WrHa	SpHa
left (hand)	tjhá	<u>qallavq</u>	[dja tjhá]
lift up / hold in arms	tjhî	qiq	÷
raise, care for	tjhu	qu	÷
pear	tjhɛ	qeil	÷
somebody else	àtjhò	aqqoq	÷
sweet	tjhó	qul	÷

Ak tjh- / Ha c- [tsh] (Open)

	Ak	WrHa	SpHa
paddy	tjhɛ	ceil	÷
a stick, switch	dá- <u>tjhv̄</u>	ddal <u>cil</u>	÷
dew	tjhà	<u>ciiqhaq</u>	÷
poor	tjhò	cyuq	÷
Thai, Shan	bî- <u>tjhìn</u>	a <u>qcaoq</u>	÷

Ak tjh- / Ha k [k] (Open)

	Ak	WrHa	SpHa
horn	tjhò	kyul	[khúi]
capable, able	tjhó	kyul	÷

NB Ha kyul [khúí] and not [khó]. Ha -yu otherwize pronounced [ð].

Ak tj- / Ha j- [tj] (Closed)

	Ak	WrHa	SpHa
boil, cook	tjàq	javq	÷
evening	ù-tjíq	aoqjivq	÷
water	i-tjùq	wuljuvq	[ú tjuq]
compare	tjεq	jeiv	÷
very black	naq tjòq i	navjovqnei	÷

Ak tj- / Ha z- [ts] (Closed)

	Ak	WrHa	SpHa
rope	átjaq	alzav	÷
rat	ho-tjàq	huzavq	[xhú tsá]
a little	átjìq	alziv	÷

Ak dj- / Ha jj- [dʒ] (Open)

	Ak	WrHa	SpHa
wind	djà- lɛ	jjaqleil	[dʒa lɛ]
paddy house	tjhé- dji'	ceiljjil	÷
fog	djù- xhô	jjoqhyuq	÷
thunder	m djè djè	aoqjijiq	[ɔ dʒi]
be, exist	djó	jjol	[dʒú]

Ak dj- / Ha zz- [dʒ] (Open)

	Ak	WrHa	SpHa
beautiful	djà	zzaqqulnei	÷
liquor	dji'-bà	zziilbbaq	[dʒi' ba]
insect	àdju	aqzzuq	÷
domestic animal	djè- zà	zzeiqssaq	÷
do, make	djáŋ	zzaol	÷

Ak dj- / Ha jj- [dʒ] (Closed)

	Ak	WrHa	SpHa
have, be (inanimate)	djaq	jjav	[djaq]
well cooked	djàq	jjavq	÷

Ak dj- / Ha zz- [dʒ] (Closed)

	Ak	WrHa	SpHa
wild banana	ŋa-djεq	alzzeivq	÷

### Ak nj- / Ha ni- [nj] (Open)

	Ak	WrHa	SpHa
can	nja	nia	÷
two	njī	niq	[njī]
buffalo	ànjò	aqniuq	[njù]
green	njō	niul	÷
short	njm	niaol	[njɔ̄]

### Ak nj- / Ha n- [n] (Open)

	Ak	WrHa	SpHa
younger sibling/brother	ànjí	aqníl	[ànī]

It is very difficult to hear on the tape whether there actually is a difference between the initials in 'two' and 'younger brother' in Hani. According to the spelling it must be a dental and not a palatalized initial.

### Ak nj- / Ha ni- [nj] (Closed)

	Ak	WrHa	SpHa
catch	njɛq	nieivq	÷

### Ak th- / t- [th] (Open)

	Ak	WrHa	SpHa
don't	thà	taq	÷
stand up	thú	tul	[thú̄]
sound, voice	thé	ddoqteil	[dò thé̄]
be in a hurry	thɛ	teiq	÷
thousand	tháŋ	taol	[thó̄]

### Ak th- / Ha q- [tjh] (Open)

	Ak	WrHa	SpHa
one	thí	qiq	[tjhí̄]

### Ak t- / Ha d- [t] (Closed)

	Ak	WrHa	SpHa
chisel	tàq	davq	÷
tie	pàq <u>tòq</u>	bavqdovq	÷
crossbow	kaq <u>tøq</u>	gavdev	÷

Ak d- / Ha dd- [d] (Open)

	Ak	WrHa	SpHa
father	à <u>də</u>	a <u>qddə</u>	[àda]
beat	dî	ddiq	÷
head	ù- <u>dù</u>	wu <u>qdduq</u>	[ùdù]
melon	má- <u>dε</u>	ma <u>lddei</u>	[mádε]
drink	dó	ddol	[dó]
wear (clothes)	dm	ddaoq	[dɔ]
wing	à <u>dáŋ</u>	a <u>qddaoł</u>	÷

Ak d- / Ha dd- [d] (Closed)

	Ak	WrHa	SpHa
climb, up	daq	ddav	[daq]
turbid, muddy	diq	ddiv	÷
make a fire	dòq	ddovq	÷
alive	dèq	ddeivq	÷
put on, fasten	dɔq	ddov	÷
soak	dyq	ddee <sup>v</sup>	÷
cut	dəq	ddev	÷

Ak n- / Ha n- [n] (Open)

	Ak	WrHa	SpHa
sick	ná	nal	[ná]
red	né	nil	[ní]
from, with	nε	nei	÷
you (sing.)	nó	nol	[nó]
heart	ny- <u>ma</u>	<u>neema</u>	[ny ma]
think, wake up	nô	nyuq	[nô]
rice ears	tjhε <u>ní</u>	ceilnaol	÷
sun, day	naŋ	nao	[nɔ]

Ak n- / Ha n- [n] (Closed)

	Ak	WrHa	SpHa
black	naq	navjovqnei	[ná tjòq nε]
sandals	shɛ- <u>nɔq</u>	seivqnaov	÷
seed, kernel	ányq	a <u>lneev</u>	[nyq]

'Black', WrHa nav is not laryngealized on the tape, where it only occurs followed by [tjòq nε], which is probably an intensifier.

Ak pjh- / Ha pi- [pjh] (Open)

	Ak	WrHa	SpHa
have fever	pjhà	piaq	÷
white	pjhú	piul	[pjhu]
release	pjhè	-pieiq	÷

Ak pj- / Ha bi- [pj] (Closed)

	Ak	WrHa	SpHa
braid	pjèq	bievq	÷
change, become	pjèq	bievq	÷

Ak pj- / Ha bbi- [bj] (Closed)

	Ak	WrHa	SpHa
get bad, ruin	pjaq	bbiav	÷

Ak bj- / Ha bbi- [bj] (Open)

	Ak	WrHa	SpHa
dawn	bja	bbia	÷
open (eyes)	bje	bbiei	÷
meal	bjɔ	bbiol	÷
water hole	bjö	eel <u>bb</u> y <u>u</u>	÷
full	bjaŋ	bbiao	÷
flying squirrel / fly	ho- <u>bjɔ</u>	bbiaol	[bjáo]

The normal word for 'fly' in Akha is zo. Cf. WB pyam 'fly'. The TB cognate has survived only in the word for 'flying squirrel' in Akha, with tone 3 though instead of 1. Note also the pronunciation in Hani: [bjáo], where bjɔ , in analogy with others, would be expected.

Ak bj- / Ha bbi- [bj] (Closed)

	Ak	WrHa	SpHa
sow	bjaq	bbiav	÷
chop, mince	bjeq	bbieiv	÷

Ak mj- / Ha mi- [mj] (Open)

	Ak	WrHa	SpHa
many	mjà	miaq	÷
thing	mjò	<u>miaoqggaoq</u>	÷
name	tshó- <u>mjáŋ</u>	<u>colmiaol</u>	[tshó <u>mjɔ̄</u> ]

Ak mj- / Ha mi- [mj] (Closed)

	Ak	WrHa	SpHa
eye	mjaq	miav	[mjaq]
monkey	ámjòq	<u>almiuvq</u>	÷
lick	mjèq	mievq	÷

Ak ph- / Ha p- [ph] (Open)

	Ak	WrHa	SpHa
change	phá	pal	÷
grandmother	àphi	<u>aqqiq</u>	[àphi]
bottle gourd	í-phù	<u>haolpuq</u>	÷
shirt	phé-xhàŋ	<u>peilhaoq</u>	[phé xhɔ̄]
side, direction	phö	pyu	[phö]
blue	phy	peel	÷
rotten	phè	peq	÷
great grandparents/great grandfather	àphô	<u>aqqyuq</u>	÷
open	phaŋ	pao	[phɔ̄]

Ak p- / Ha b- [p] (Closed)

	Ak	WrHa	SpHa
tie	pàq-tòq	<u>bavqдовq</u>	÷
lungs	sjhà-pòq	<u>bovq</u>	[pòq]

Ak b- / Ha bb- [b] (Open)

	Ak	WrHa	SpHa
moon	ba-la	<u>bba'la</u>	[ba la]
tear (in eye)	mjaq-bí	<u>miavbbil</u>	[mjaq bí]
start	bε	bbei	÷
tree	ábɔ̄	<u>albbol</u>	÷
blanket	áby	<u>albbee</u>	÷
scoop out	bò	bbeq	÷

	Ak	WrHa	SpHa
gong	<u>bö</u> -lo	<u>bbyu'</u> lyu	÷
rainfall; clf for hollow things	bàŋ	bbaoq	÷
<u>Ak b- / Ha bb- [b] (Closed)</u>			
carry on a pole	bàq	bbavq	÷
give	bîq	bbivq	[bîq]
rotten	bùq	bbuvq	÷
write	bòq	bbuvq	[bùq]
open up, split	bèq	bbeivq	÷
shoot; fluff	bəq	bbev	÷
<u>Ak m- / Ha m- [m] (Open)</u>			
not	mà	maq	[mà]
fire	<u>mî</u> -dzà	<u>miqzzaq</u>	[mî dzà]
nose	<u>ná</u> - <u>mé</u>	<u>nalmeil</u>	[ná <u>mé</u> ]
old	mò	moq	[mò]
good	mỳ	meeq	[mỳ]
horse	màŋ	moq	[mò]
<u>Ak m- / Ha m- [m] (Closed)</u>			
they	àjòq <u>màq</u>	aqyoq <u>mavq</u>	[à jomàq]
close (eyes)	miq	miv	÷
fall down, drop	ga <u>mòq</u>	muqv	÷
hungry	mèq	meivq	[mèq]
want to	mòq	movq	÷
<u>Ak h- / h- [xh] (Open)</u>			
ask, listen	<u>ná</u> - <u>hà</u>	<u>nalhaq</u>	[ná <u>xha</u> ]
day before yesterday	<u>hù</u> -nay	<u>huqnao</u>	[ <u>xhù</u> nə]
rat	<u>ho</u> -tjàq	<u>huzavq</u>	[ <u>xhú</u> tsàq]
big	hỳ	heeq	[xhò~xhy]

	Ak	WrHa	SpHa
addle, row	hə	he	÷
ildcat	áhàŋ	alhaol	÷
<u>k h- / Ha hh- [χ] (Open)</u>			
	Ak	WrHa	SpHa
neself	jò-ha	yoqhhaq	÷
efore, long ago	gá-hu	ggalhhu	÷
<u>k h- / Ha zero- (Open)</u>			
	Ak	WrHa	SpHa
hushroom	áhím	ciqaol	÷
ear	xhà-hím	haoqaol	÷
<u>ak xh- / Ha h- [xh] (Open)</u>			
	Ak	WrHa	SpHa
tiger	xhà-là	haqlaq	[xhà-là]
ather's sister	àxhò	aqhuq	÷
rrigation ditch	ý-xhè	eelheiq	÷
steal	xhò	hyuq	÷
bowl	xhìm-mà	haoqmaq	÷
area	mí-xhàŋ	milhaoq	÷
<u>ak xh- / Ha k- [kh] (Open)</u>			
	Ak	WrHa	SpHa
buttocks	dò-xhìm	ddaoqkaoq	÷
<u>ak x- / Ha h- [x] (Closed)</u>			
	Ak	WrHa	SpHa
adult (human + strong)	tshó xaq	colhav	[tshó xaq]
year	xòq	huvq	[xùq]
cut, break	xèq	heivq	÷
hole	dú-xòq	dduqhovq	÷

Ak γ- / Ha hh- [γ] (Open)

	Ak	WrHa	SpHa
strength (person + strong)	γà xaq	hhaqha v	÷
chew	γò	hhyuq	÷
separate, leave	γè	hhoq	÷
charcoal	xhà- γè	haqhheq	[xhà γè]
nine	γô	hhyuq	[γô]
pillow	ù- γm	hhaoq	÷
hard, stiff	γáŋ	hhaol	÷

Ak γ- / Ha hh- [γ] (Closed)

	Ak	WrHa	SpHa
needle	à γòq	aqhhovq	÷
return	γòq	hhuvq	[γòq]

Ak sjh- / Ha s- [sh] (Open)

	Ak	WrHa	SpHa
meat	sjhà	saq	[shà]
die	sjhí	siil	[shi]
louse	sjhɛ-mó	seil	[shɛ]
clean	sjhó	sol	÷
gold, yellow	sjhý	sil	[shý]
lead by hand	sjhè	seq	[shè]
iron	sjhm	saol	[shɔ̄]
beeswax	bjà- sjhàŋ	bbiaqsaq	÷

Ak sj- / Ha s- [s] (Closed)

	Ak	WrHa	SpHa
seven	sjiq	sivq	[sìq]
inhale	sjuq	suv	÷
pour	sjeq	seiv	÷
rub, stroke	sjɔq	sov	÷
new	sjyq	sivq	[sìq]

Ak sh- / Ha s- [sh] (Open)

	Ak	WrHa	SpHa
flat, even	shá	ddeilsal	÷
sharpen	shí	siiq	÷
who	àshú	aqsol	[àshú]
hoof	shè	seq	÷
tooth	shè	seq	[shè]
tree	shm	saol	[shó]
owner	jɔ-sháŋ	yolsaol	÷

Ak s- / Ha s- [s] (Closed)

	Ak	WrHa	SpHa
breathe	sàq	savq	÷
wipe	siq	siiv	÷
kill	sɛq	seivq	÷

Ak j- / Ha y- [j] (Open)

	Ak	WrHa	SpHa
hundred	já	yal	[já]
boy	zà-jø	ssaqyo	÷
cut, slice	jɛ	yeiq	÷
oneself	jø-ha	yoqhhaq	÷
bone	sjhà-jø	saqyyuq	[shà jø]
guest	dà-jan	ddaqyao	÷

Ak j- / Ha hh- [γ] (Open)

	Ak	WrHa	SpHa
get, obtain	ja	hha	[γa]

Ak j- / Ha ss- [z] (Open)

	Ak	WrHa	SpHa
elephant	ja-ma	ssama	[za ma]
rain	ù jɛ jɛ	aoqssseil	[zɔ~za]
seed	ájø	alssvuq	÷
use, spend	jìn	ssaaoq	÷

Ak j- / Ha h- [xh] (Open)

chicken

Ak

ja-tjiq

WrHa

aqha

SpHa

[àxha]

Ak j- / Ha x- [sjh] (Open)

shed, shack

Ak

já tshm̄

WrHa

xalqaol

SpHa

÷

Ak j- / Ha y- [j] (Closed)

sweep

Ak

jaq

WrHa

yav

SpHa

÷

sleep

jùq

yiuvq

[jùq]

drunk

jɛq

yevq

[jɛq]

elder sibling/sister

àjìqaqyivq

÷

Ak j- / Ha x- [sj] (Closed)

eight

Ak

jɛq

WrHa

xeivq

SpHa

[sjɛq]

Ak z- / Ha ss- [z] (Open)

child, son

Ak

zà

WrHa

ssaq

SpHa

[zà]

generation

zí

ssiil

÷

leopard

xhà-zì

haqssiq

÷

walk

zò

ssuq

[zu]

Ak z- / Ha hh- [γ] (Open)

winnow

Ak

zá

WrHa

hhal

SpHa

÷

palm of hand

làq zàlavqhhaq

÷

buy

zé

hhel

[γé]

Ak z- / Ha s- [sh] (Open)

father's younger brother

Ak

àzó

WrHa

alsuq

SpHa

÷



## Ak zero- / Ha h-, y-, w- (Open)

	Ak	WrHa	SpHa
how many	ámjaq	halmiav	÷
go	r̥	yil	÷
head	ù-dù	wuqdduq	[ù dù]

## Ak zero / Ha w-, hh-, zero- (Closed)

	Ak	WrHa	SpHa
egg	ja-uq	alwuv	[á uq]
below	dàq oq phɔ	aqhhuvpyu	÷
ripe (fruit)	òq	ovq	÷

## SUMMARY AKHA/HANI INITIALS

Non-laryngealized syllables:

Akha	Hani
kh-	k- [kh] (x- [sjh] )
g-	gg- [g]
ŋ-	ng- [ŋ] (n- [n ?] )
tsh-	c- [tsh] (q- [tjh] )
dz-	zz- [dz]
tjh-	q- [tjh] / c- [tsh] (k- [kh] )
dj-	jj- [dj] / zz- [dz]
nj-	ni- [nj] / n- [n]
th-	t- [th] (q- [tjh] )
d-	dd- [d]
n-	n- [n]
pjh-	pi- [pjh]
bj-	bbi- [bj]
mj-	mi- [mj]
ph-	p- [ph]
b-	bb- [b]
m-	m- [m]
h- }	{ h- [xh] (hh- [γ] , zero- )
xh- }	{ h- [xh] (k- [kh] )
γ-	hh- [γ]

Akha	Hani
<b>sjh-</b>	<b>s- [sh]</b>
<b>sh-</b>	<b>s- [sh]</b>
<b>j-</b>	<b>y- [j] / ss- [z] (hh- [γ], h- [xh], x- [sjh])</b>
<b>z-</b>	<b>ss- [z] / hh- [γ] (s- [sh])</b>
<b>l-</b>	<b>l- [l]</b>
<b>zero</b>	<b>zero- / h- (+a) / y- (+i) / w- (+u)</b>

aryngealized syllables:

Akha	Hani
<b>k-</b>	<b>g- [k] (h- [x])</b>
<b>g-</b>	<b>gg- [g]</b>
<b>ŋ-</b>	<b>No cognate</b>
<b>ts-</b>	<b>z- [ts]</b>
<b>dz-</b>	<b>zz- [dz]</b>
<b>tj-</b>	<b>j- [tj] / z- [ts]</b>
<b>dj-</b>	<b>jj- [dj] / zz- [dz]</b>
<b>nj-</b>	<b>ni- [nj]</b>
<b>t-</b>	<b>d- [t]</b>
<b>d-</b>	<b>dd- [d]</b>
<b>n-</b>	<b>n- [n]</b>
<b>pj-</b>	<b>bi- [pj] (bbi- [bj])</b>
<b>bj-</b>	<b>bbi- [bj]</b>
<b>mj-</b>	<b>mi- [mj]</b>
<b>p-</b>	<b>b- [p]</b>
<b>b-</b>	<b>bb- [b]</b>
<b>m-</b>	<b>m- [m]</b>
<b>x-</b>	<b>h- [x]</b>
<b>γ-</b>	<b>hh- [γ]</b>
<b>sj-</b>	<b>s- [s]</b>
<b>s-</b>	<b>s- [s]</b>
<b>j-</b>	<b>y- [j] (x- [sj])</b>
<b>z-</b>	<b>ss- [z] / hh- [γ]</b>
<b>l-</b>	<b>l- [l]</b>
<b>zero</b>	<b>zero- / w- (+u), hh- [γ](+u)</b>

As can be seen from the lists and the summary of Akha/Hani initials there is, with a few exceptions, a one-to-one correspondence with regard to velars, dentals, labiopalatals, and labials. In Akha there seems to be a merger taking place between tsh- and tjh-, dz- and dj-, sjh- and sh- in the direction of tjh-, dj-, and sh- respectively (Cf. Sound Changes in Akha). This tendency is probably also true for Hani, but it is difficult to tell for sure owing to the nature of the data available. Ak tsh- and dz- are almost always the same in Hani, but Ak tjh- and dj- correspond both to Ha c- [tsh] and q- [tjh]. Ak sjh- and sh- both go with Ha s- [sh]. There is in Hani a sound [sjh], spelt x-. This initial is reflected in Akha as k- or j-, but there are very few cognates. Ak h- and xh- merge to h- in Hani, and there is ample evidence on tape that it is, as a rule, pronounced [xh]. One - and so far the only - exception is the word for 'cooked rice' Ak hò, Ha hoq, which on tape is pronounced [hò]. Ak z- is often mixed with j-, which also seems to be the case for Hani. There are also some examples of Ak z- / Ha hh- [γ]. These words mostly have a w- initial in WB, which otherwize also may correspond with Ak γ-. All Hani finals can appear with zero initial. The finals -i and -u are spelt yi and wu respectively, but are pronounced as [i] and [u].

Comparing my analysis of the relationship between Akha and Hani with that made by Hú/Dài and Bradley "Akha and Southern Loloish", there are a few differences. Bradley posits, based on Hú/Dài, 10 finals in Lù-chūn Hani:

i	y	l	w	u
e			ə	o
				ɔ
		a		

/l/ and /w/ are in complementary distribution, and I write than as 'y', spelt in Hani either as -i or -ee, depending on the initial. I. e. the distinction i / y is in Hani spelt -ii/-i after the initials [ts-, dz-, s-, z-], otherwize spelt -i/-ee (see pp. 4, 5, 10 for examples)

The Lù-chūn Hani vowel 'y' is described as Lewis 'oi' = Ak 'ü' (front high rounded). In my data this vowel is not 'ü' but 'ö', = Lewis 'oe', WrHa 'yu' (front mid rounded). See examples on p. 11. There are so far no examples of a merger of 'o' towards 'ü' as said by Bradley, p. 6.

The vowel 'e' in Bradley does not occur in my data, but the reflex in Hani of Akha 'e' is either -i [i] or -ei [ɛ]. See examples p. 6. Ha -ei [ɛ] regularly also corresponds to Ak -ɛ.

The tonal system of Hani and Akha is entirely the same, and there seem to be only a few exceptions (see the list of cognates). The low tone, especially in non-laryngealized syllables, falls more distinctively in Hani than in Akha. There are some examples where Akha and Hani differ in phonation type. Apart from those mentioned in Bradley p. 8 ('ant', 'stone'), where Akha is irregular, Hani has laryngealization in the following words against the rule in other TB languages:

	Ak	WrHa	SpHa
four	ò	yuvq	[òq]
five	ŋà	ngavq	[ŋàq]
blood	sjhí	siivq	[sîq]

In Akha there occurs in a few words a high tone in a laryngealized syllable, as e.g. tóq lóq ɛ 'like this/that', àdjóq ɛ 'how'. This is so far not reported for Hani.

The Hani-Akha conversion tables (App. 2) give all the syllables that occur in the Hani Wordlist with transcription into the Akha system, even though not all of them are represented on the Hani tape. The exceptions are given above, but some problems can't be solved until more material becomes available. See e.g. the WrHa syllable ggui, which is not on the tape. I have tentatively written it as Ak [gui] in analogy with WrHa kyul, Ak [khúi] 'horn'. Note also e.g. 'fly' WrHa bbiaol, which on tape is pronounced [bjáo] and not [bjó], which would be expected. There may of course be many more exceptions of this kind.

The empty slots in the conversion tables do not necessarily mean, that these syllables do not occur in Hani, but only that they are not represented in the Wordlist on which this study is based.

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APPENDIX 1

<u>Akha - a / Hani - a</u>	<u>Akha</u>	<u>Hani</u>	* Tone	Comments
how many	<u>ámjaq</u>	<u>halmiav</u>	1	
later, in a while	<u>àkhá no</u>	<u>àqkal</u>	1	
rice	khá	<u>kalssaq</u>	1	Ha 'rice shoot, rice seedling'
thin, sparse, separated	khá	<u>kal</u>	1	
crab	<u>ákha</u>	<u>alka</u>	3	
mosquito net	<u>by-kha</u>	<u>bbeexa</u>	3	NB initial
inbetween	khà	<u>alkaq</u>	2	Cf. Ak ákhà 'space'
umbrella	<u>bý-khà</u>	<u>bbeelkaq</u>	2	
road	<u>gá-ma</u>	<u>ggalma</u>	1	Cf. 'crossroad' Ak gá-tshín, Ha ggaleaq
hear, long for, think of	gà	<u>ggaq</u>	2	
I	ŋá	<u>ngal</u>	1	
open (mouth)	ŋa	<u>nga</u>	3	
borrow, lend	ŋà	<u>ngaq</u>	2	
fish	<u>ŋà-sjhà</u>	<u>ngaqddeil</u>	2	Cf. Ak ŋà-dé 'minnow'
five	ŋà	<u>ngavq</u>		Ak *2, Ha *LS
sunshine	<u>m-tshá~</u>	<u>aoqcal</u>	1	
	ù-tshá			
pot	<u>gì-tsha</u>	<u>ggeecal</u>		Ak *3, Ha *1, Ak elab. for ð-làj 'pot'
earth	<u>mí-tshà</u>	<u>milcaq</u>	2	
food	dzá	<u>zzal</u>	1	
gun powder	<u>mí-dzá</u>	<u>miqzzal</u>	1	
fire	<u>mí-dzà</u>	<u>miqzzaq</u>	2	
eat	dzà	<u>zqaq</u>	2	
quarrel	<u>dè dzà tjhé</u>	<u>ddeiqzzaq</u>	2	
	<u>dzà</u>			
left (hand)	tjhá	<u>gallavq</u>	1	
expand, stretch out	dja	<u>jja</u>	3	
wind	<u>djà-le</u>	<u>jjaqleil</u>	2	
beautiful	djà	<u>zqaqqulnei</u>	2	
can	nja	<u>nia</u>	3	
don't	thà	<u>taq</u>	2	
keep	thà	<u>taq</u>	2	
a stick, switch	<u>dá-tjhý</u>	<u>ddalcil</u>	1	
chopstick	dju-dá	<u>jjulddal</u>	1	
father	<u>àda</u>	<u>aqdda</u>	3	
guest	<u>dà-jan</u>	<u>ddaqyao</u>	2	
sick	ná	<u>nal</u>	1	
ask, listen	<u>ná-hà</u>	<u>nalhaq</u>	1	
stop, rest	nà	<u>naq</u>	2	
ear	<u>nà-bó</u>	<u>naqbbol</u>	2	
have fever	pjhà	<u>piaq</u>	2	
side	<u>bjá-yá</u>	<u>bbialzzeil</u>	1	Lewis p. 43
dawn	bja	<u>bbia</u>	3	
bee	bjà	<u>bbiaq</u>	2	
many	mjà	<u>miaq</u>	2	
crossbow arrow	kaq-mjà	<u>gavmiaq</u>	2	

	Akha	Hani	*Tone	Comments
change, exchange	phá	pal	1	
cloth	shà-phá	haqpal	1	
frog	xhà-phà	haqpaq	2	
shadow	ábá	aqbba	1	
cheek	bà-ba	bbaqbba	2 + 3	
white, light	ba	bba	3	
moon	ba-la	bba'la	3	
blacksmith	ba-djí	bbazziq	3	Lewis p 28, Ak also <u>baq-dji</u> , *HS
thin	bà	bbaq	2	
river	ló-bà	bbaqma	2	
whiskers	bà seq seq	bbaqseil	2	Ak 'have sideburns'
liquor	djí-bà	zzilbbag	2	
group	bà-màq	bba		Ak *2, Ha *3
full (e. g. with grains)	má	mal	1	
pumpkin	má-de	maldei	1	
road	gá-ma	ggalma	3	
mother	àma	àqma	3	
stomach	bɔ-ma	bbaoma	3	
elephant	ja-ma	ssama	3	
log	dò-ma	ddaoqma	3	
not	mà	maq	2	
bowl	xhò-mà	haoqmaq	2	
oneself	jò-ha	yoqhhaq		Ak *3, Ha *2
ask, listen	ná-hà	nalhaq	2	
pour (water)	xhá	hal	1	Ha also 'spit'. Cf. Ak xha 'spit'
which are	xhá djaq	haljjav	1	
bear	xhà-hrm	haoqaol	2	Vowel irregular
bitter	xhà	haq	2	
charcoal	xhà-yà	haqhheq	2	
husband, man	xhà dzé zà	haqjilssaq	2	
tiger	xhà-là	haqlaq	2	
ashes	xhà-le	haqleil	2	
frog	xhà-phà	haqpaq	2	
stone	xhà-lo	havqluv		Ak *2, Ha * LS
strength	jà xaq	hhaghav	2	
ask for	sjhá	sal	1	
meat	sjhà	saq	2	
pity	sjhà	saq	2	
day after tomorrow	shá-phè	salpeiqnao	1	
flat, even	shá	ddeisal	1	Ha 'level piece of land'
comfortable	djó shá	jjolsal	1	
thread	shà-kháñ	saqkaol	2	
cotton	shà-là	saqlaq	2	
cheap	já	yal	1	
hundred	já	yal	1	
hill field	dáy-já	ddalyai	1	Ak also <u>já-ŋe</u>
shed, shack	já-tshín	xalqaol	1	NB Ha initial

	Akha	Hani	*Tone	Comments
chicken	ja-tjiq	aqha	3	
elephant	ja-ma	ssama	3	
get, obtain	ja~za	hha	3	
winnow	zá	hhal	1	
son	zà	ssaq	2	
domestic animals	djè-zà	zzeiqssaq	2	
wife	mì-zà	miqssaq	2	
old woman	àphí zà mò	aqpiqssaqmòq	2	
son-in-law	àzà	aqssaq	2	
sole of foot	àkhý phè zà	keelhhaq	2	
palm of hand	làq zà	lavqhhqaq	2	
husband, man	xhà dzé zà	haqjjilssaq	2	
come	lá	lal	1	
moon	ba-la	bba'la	3	
tiger	xhà-là	haqlaq	2	

Akha -i / Hani -i/-ii, -u

	Akha	Hani	*Tone	Comments
go	i'	yil	1	Ak 'go down'
water	í-tjùq	wuljuvq	1	
leaf lard	tshí'	bbialciil	1	Ak 'lard, oil'
wash	tshí	ciiq	2	
sap	ádzí	alzziiq	2	
ride	dzi	zziq	2	
hold in arms (e. g. a child)	tjhí	qiq	2	Ak 'lift up'
thatch grass	ù-djí'	eqjiil	1	
paddy house	tjhé djí'	ceiljjil	1	
bird	ádjí'	alzziiil	1	
liquor	djí-bà	zziilbbaq	1	
blacksmith	ba-djí	bbazziiq	2	Ak also baq-djí
younger sibling	ànji'	aqnil	1	
small	njí'	nil	1	
outside	làq-njí'	laqnil	1	
two	njí	niq	2	Cf. Ak njíq (when counting)
one	thí	qiq	2	NB Ha initial. Cf. Ak tñq (when counting)
beat	dí	ddiq	2	
chilli	shí-phi'	laqpil	1	
	shà-phi'			
grandmother	àphí	aqpiq	2	
close, shut	phi thè	piq	2	
divide	bí'	bbil	1	

	Akha	Hani	* Tone	Comments
tear (in eye)	mjaq- <u>bí</u>	miav <u>bbil</u>	1	
cat	á <u>mi</u>	al <u>mil</u>	1	
earth	mí-tshà	mil <u>caq</u>	1	
yesterday evening	mí-tjíq	mil <u>jivq</u>	1	
gun, rifle	mí-bæq	miqb <u>bev</u>	2	
die	sjhí	si <u>il</u>	1	
in front	mè-sjhí	mei <u>qsii</u>	3	
blood	sjhí	si <u>ivq</u>		Ak *2, Ha * LS
sharpen	shí	si <u>iq</u>	2	
still, yet	shí	si <u>iq</u>	2	
clf. for fruits etc.	shí	si <u>iq</u>	2	
fruit	á <u>shí</u>	alsi <u>iq</u>	2	
cowrie	hú- <u>shí</u>	helsi <u>iq</u>	2	
generation	zí	ssi <u>il</u>	1	

#### Akha -u / Hani -u, -ə, -o

	Akha	Hani	* Tone	Comments
head	ù-dù~ùq-dù	wu <u>qdduq</u>	2	
pillow	ù-γm	wu <u>qhhaoq</u>	2	
thatch grass	ù dji'	eq <u>jjil</u>	2	
call on	khú	kul	1	
call out	gú	ggul	1	
youngster	zà-gù	ssa <u>qguq</u>	2	
fat, thick	tshú	cul	1	
elder brother's wife	à <u>tshu</u>	a <u>qc<u>u</u></u>	3	
sit on heels	dò dzú dzú	ddao <u>qzzulzzul</u>	1	
raise, care for	tjhu	qu	3	
chopsticks	dju-dá	jjul <u>ddal</u>		Ak *3, Ha *1
fog	djù-xhô	jj <u>oqhyuq</u>	2	
insect	à <u>djù</u>	a <u>qzzuq</u>	2	
rise, stand up	thú	tul	1	
thick	thú	tul	1	
look like	dú	ddul	1	
sister	dú-ma	ddul <u>ma</u>	1	Ak 'male's sister'
leg	bə-dú	bbul <u>ddul</u>	1	Ak 'chicken leg'
bud	ŋa-dú	a <u>lddu</u>	3	Ak 'swollen end of wild banana stem'. Cf also Ak ádu 'corn'. Lewis p. 87 'clf. for round things, e.g. roll of cotton, ear of corn'.
corn, maize	á <u>du</u>	cei <u>lddu</u>	3	
dig	dú	du <u>q</u>	2	

	Akha	Hani	* Tone	Comments
head	ù-dú	wuq <u>dduq</u>	2	
white	pjhú	piul	1	
perspiration	khò-pjhú	koqqiul	1	
bottle gourd	í-phù	haolpuq	2	
float	bu	<u>bbulhhaq</u>		Ak *3, Ha *1
cowrie	hú-shí	<u>helsiiq</u>	1	Vowel irregular
before, long ago	gá-hu~áhu	ggal <u>hhu</u>	3	
day before yesterday	hù naŋ	<u>huqnao</u>	2	
who	àshú	<u>aqsol</u>	1	
soul	shú-lá	<u>sullal</u>	1	Lewis p. 268. Ak also shá-lá
fry	lú	lul	1	

## Akha -e / Hani -ei, -i

	Akha	Hani	* Tone	Comments
ten	tshé	<u>ceil</u>	1	
hair (on head)	tshé-kháŋ	<u>ceilkaol</u>	1	
man	xhà dzé zà	haq <u>jjilssaq</u>	1	Ak also 'husband'. NB the difference in Hani in these two words. 'Husband' Ha also huljj
hawk, eagle	xhà dzé	haq <u>zzeil</u>	1	
thunder	m djè djè	aoq <u>jjiq</u>	2	
sift	djè	jjiq	2	
domestic animals	djè-zà	<u>zzeiqssaq</u>	2	
back, spine	dáŋ-thé	<u>ddaolteil</u>	1	
sound, voice	thé	<u>ddoqteil</u>	1	
wild boar	zàq thè	hhav <u>qteiq</u>	2	
red	né	nil	1	
bamboo strip	áne	<u>alniq</u>	2	

Akha -o / Hani -u, -o, -yu

	Akha	Hani	* Tone	Comments
tall	gó	ggoq		Ak *1, Ha *3
buffalo	ànjò	<u>aqniuq</u>	2	
ant	áho	<u>alwuvlalddeiq</u>		Ak *3, Ha *HS
flying squirrel	ho-bjɔ~	<u>hubbiaol</u>	3	
	xho-bjɔ			
rat	ho-tjàq~	<u>huzavq</u>	3	
	xoq-tjàq			
father's sister	àxhò	<u>aqhuq</u>	2	
chew	γò	hhyuq	2	Irregular vowel correspondence.
boy	zà-jo	<u>ssaqyo</u>	3	
walk	zò	<u>ssuq</u>	2	
stone	xhà-lo	<u>havqluv</u>		Ak *3, Ha *HS

Akha -e / Hani -ei

	Akha	Hani	* Tone	Comments
say	ɛ	eil	1	
frost	ŋɛ	<u>haqnieil</u>	1	NB Ha initial
forget	ŋɛ	<u>nieiljav</u>	1	NB Ha initial
hair (on head)	<u>tshɛ kháŋ</u>	<u>ceilkaol</u>	1	Lewis p. 316. Ak also tshó-kháŋ
plow, hoe	tshɛ	<u>ceiq</u>	2	Cf. Ak tshɛ-ma 'mattock'
edge	bɛ-dzɛ	<u>bbialzzel</u>	1	
left over	dzɛ	<u>aqzzeiq</u>	2	
paddy	tjhɛ	<u>ceil</u>	1	
sour	tjhɛ	<u>qeil</u>	1	
cloth used for carrying children on back	by-thɛ	<u>bbeeteiq</u>	2	
be in a hurry	thɛ	<u>teiq</u>	2	
level	dɛ	<u>ddei</u>	3	
pumpkin	má-dɛ	<u>malddei</u>	3	
scold; push; sting, bite	dɛ	<u>ddeiq</u>	2	
quarrel	<u>dɛ dzà tjhɛ</u>	<u>ddeiqzzaq</u>	2	
	dzà			
from; with	nɛ	<u>nei</u>	3	
release, let go	pjhɛ	<u>pieiq</u>	2	
open (eyes)	bjɛ	<u>bbriei</u>	3	Ha also 'bud'
clothes, shirt	<u>phɛ-xháŋ</u>	<u>perlhaq</u>	1	
day after tomorrow	shá-phɛ	<u>salpeiqnao</u>	2	
root, base	dò-phɛ~	<u>ddaoqpeiq</u>	2	
	dò-phɛ			

	Akha	Hani	* Tone	Comments
struggle	bε	bbeil	1	Ak 'struggle to get away', Lewis p. 34
goitre	ló-bε	<u>bbeiljjil</u>	1	Cf. Ak bε-djí 'craw of birds'
snivel	ná-bε	<u>aqbbeil</u>	1	
start	bε	<u>bbei</u>	3	Ha also 'have ever Ved'
nose	ná-mε	<u>nalmeil</u>	1	
teach	mè	<u>meiq</u>	2	
in front	<u>mè-sjhi</u>	<u>meiqsii</u>	2	
irrigation ditch	yé-xhè	<u>eelheiq</u>	2	
door	yoq-xhè~	<u>hhoheiq</u>	2	
	oq-xhè			
louse	<u>sjhε-mó</u>	<u>seil</u>	1	
hoof	shè	<u>seiq</u>	2	
sandals	<u>shè-nɔq</u>	<u>seivqnaov</u>		Ak *2, Ha *LS
rain	ùjε jε	<u>aoqsseil</u>	1	
cut, slice	jε	<u>yeiq</u>	2	
wind	djà-lε	<u>jjaqleil</u>	1	
ashes	xhà-lε	<u>haqleil</u>	1	

Akha -o / Hani -o, -ao, -u, -yu

	Akha	Hani	* Tone	Comments
fast, quick	khó	kol	1	
perspiration	<u>khò-pjhú</u>	<u>koqpiul</u>	2	
mosquito	<u>tjhó-gò</u>	<u>yalggoq</u>	2	
person	<u>tshó-hà</u>	col	1	
adult	<u>tshó-xaq</u>	<u>colhav</u>	1	
jump	tshò	coq	2	
study	dzø	<u>zzol</u>		Ak *3, Ha *1
fool, idiot	àdzò	<u>aqzzoq</u>	2	
other, somebody else	àtjhò	<u>aqqoq</u>	2	
be, exist (animate)	djó	jjol	1	
comfortable	<u>djó shá</u>	<u>jjolsal</u>	1	
drink	dó	ddol	1	
word	dò	ddoq	2	
buttocks	<u>dò-xhìm~</u>	<u>ddaoqkaoq</u>	2	
	<u>dò-dàŋ</u>			
<u>dò-mí</u>	<u>ddaoqmíq</u>	2		
root, base	<u>dò-phè~</u>	<u>ddaoqpeiq</u>	2	
	<u>dò-phè</u>			
sit on heels	dò dzú dzú	<u>ddaoqzzulzzul</u>	2	
you (sing.)	nó	nol	1	
broom	jaq-pjhó	<u>yavpyul</u>	1	NB Ha vowel
face	mjaq-pjhò	<u>miavpyuq</u>	2	"
meal	bjó	bbiol	1	
flying squirrel	ho-bjø~	<u>hubbiaol</u>		Ak *3, Ha *1

	Akha	Hani	* Tone	Comments
tasteless	bjò	bbioq	2	
thing	mjò	<u>miaoqggaoq</u>	2	
side, direction	phò	pyu	3	
ear	nà- <u>bó</u>	<u>naqbbol</u>	1	
tree	á <u>bó</u>	<u>albbol</u>	1	
clf. for trees	bó	bbol	1	
grandfather	à <u>bó</u>	<u>aqbbol</u>	1	
stomach	<u>bó-ma</u>	<u>bbaoma</u>	3	NB Ha vowel
blow	bò	bbo	3	
have, be (animate)	bò	bbo	3	
fan	<u>bó-shə</u>	<u>bbosev</u>	3	
deaf	nà- <u>bò</u>	nà- <u>bò</u>	2	
look	mò	mol	1	
clf. for animals	mò	mol	1	Ha also general clf.
fly (noun)	mò	<u>almol</u>	1	
body	<u>mò-do</u>	<u>hhomol</u>	1	Ak 'insect, bug', Lewis p. 9
old	mò	moq	2	
old person	tshó- <u>mò</u>	<u>colmoq</u>	2	
old woman	àphi zà <u>mò</u>	<u>aqqiqssaqmoq</u>	2	
see	hò	hu	3	NB Ha vowel
boiled rice	hò	hoq	2	
spin	γò	hho		Ak *1, Ha *3
separate, leave	γò	hhoq	2	
cabbage	γò-pàq	<u>hhonqavq</u>	2	
clean	sjò	sol	1	
morning	ùs <u>jhò</u>	<u>aoqsoq</u>	2	
sheep	jò	<u>aqyol</u>	1	
owner	<u>jo-shaij</u>	<u>yolsaol</u>		Ak *3, Ha *1
oneself	<u>jo-ha</u>	<u>yoqhhaq</u>	2	
father's younger brother	áz	<u>alsuq</u>		Ak *1, Ha *2
bridge	<u>lò</u> dzin	<u>laolzzaol</u>	1	
fall over, topple	lò	lol	1	
river	<u>lò</u> -bà	<u>lolbbaq</u>	1	
snake	á <u>lò</u>	<u>ollo</u>	1	
section (e. g. of bamboo)	lò	lo	3	
boat	lò	loq	2	
water trough	xhò- <u>lò</u>	<u>eeolloq</u>	2	Ak 'trough for feeding animals'

Akha -y / Hani -ee/-i	Akha	Hani	* Tone	Comments
honey	bjà bjà ý	<u>bbiaqee</u> l	1	
laugh	ý	eel	1	
foot	àkhý	<u>aqkeel</u>	1	
liver	pjhà-khý	<u>piqkeel</u>	1	
tasty	khý	keel	1	
iron tripod	sjhím khý	<u>saolkeel</u>	1	
dog	àkhý	<u>aqkeeq</u>	2	
daughter-in-law	khý-ma	<u>keeqma</u>	2	
star	àgy	<u>aqggeelalsiiq</u>	1	
melt	gy	ggeel	1	
chicken nest	ja-tjiq ja gy	<u>haggeel</u>	1	
dry	gy	ggee	3	
brass	gý	ggee <del>q</del>	2	
a stick, switch	dá-tjhý	<u>ddalcil</u>	1	
heart	ny-ma	<u>neema</u>	3	
tomorrow	ny-sjhò	<u>neesoq</u>	3	
release	phy	peel	1	
blue	phy	peel	1	
husks	xhà-phy	<u>haqpee</u> q	2	
boil (of water)	by	beel	1	
umbrella	by-khà	<u>bbeelkaq</u>	1	
blanket	áby	<u>albbe</u>	3	
mosquito net	by-kha	<u>bbeexa</u>	3	
cloth for carrying children	by-thè	<u>bbeeteiq</u>	3	
wife of father's younger brother, wife of mother's brother	àmy	<u>aqmee</u>	3	
good	my	meeq	2	
big	hý	heeq	2	
gold, yellow	sjhý	sil	1	
leopard	xhà-zý	<u>haqssiq</u>	2	

Akha -ö / Hani -yu, -u

	Akha	Hani	* Tone	Comments
carry on back	à	eg	2	Ha also 'cherish'
gen. part.	à	e		Ak *2, Ha *3
be	ŋá	ngeel	1	
dew	tjhè	<u>ciiqhaq</u>	2	
rotten	phè	peq	2	
dare	phè	peq	2	
wake up	bé	bbel	1	Ak 'recover'
scoop out	bè	bbeq	2	
paddle, row	hè	he	3	
strawhat	lò-hè	<u>leqhe</u>	3	
pull	γè	hhe	3	
charcoal	xhà-γè	<u>haqhheq</u>	2	
lead (by hand)	sjhè	seq	2	
fan	bo-shè	<u>bbosev</u>		Ak *3, Ha * HS
tooth	shè	seq	2	
buy	zé	hhel	1	
old	jö-ö	<u>yolyul</u>	1	
four	ô	yuvq		Ak *2, Ha * LS
grandson	ô-phè	<u>yuqpaq</u>	2	
cry, weep	ŋö	ngyul	1	
cough	tshö	cyuq	2	
hinder	tshö	cyuq	2	
belt	<u>dzö-dzàŋ</u>	<u>jjuqzzaoq</u>	2	NB Ha vowel
horn	tjhö	kyul	1	NB Ha [khúi]
capable, able	tjhö	kyul	1	Ha 耶 <sup>耶</sup> 'capable, intelligent'
able	tjhö	qaol	1	Ha 耶 <sup>耶</sup> 'can, be able'
sweet	tjhö	qul	1	
poor	tjhö	cyuq	2	
green	njö	niul	1	
rafter	njm̩ n̩jö	<u>ałniul</u>	1	
lazy	dö	ddyul	1	
peatowl	sjhm̩-dö	<u>saolddyuq</u>	2	
finger	lāq-nö	<u>lavqnyul</u>	1	
think, wake up	nö	nyuq	2	
water hole	bjö~bzo	<u>eebbu</u>	3	Ak 'hole'
nostril	ná m̩ bjo	<u>nalbbu</u>	3	
great grandfather	aphö	<u>aqpyuq</u>	2	
gong	<u>bo-lö</u>	<u>bbyu'lyu</u>	3	
bee pupa	bjá bō	<u>bbiaqbbyuq</u>	2	

	Akha	Hani	* Tone	Comments
dig earth with snout	bô	bbyuq	2	
dove	xhà - <u>xhò</u>	hoqhyuq	2	
steal	xhò	hyuq	2	
fog	djù - <u>xhò</u>	jjoqhyuq	2	
like, be friendly with	γó	hhyul	1	
maternal uncle	àγó	aqhhyu	3	
nine	γò	hhyuq	2	
seed	ájò	alssyuq	2	Cf. 'paddy seed', Ak tjhé shí jò, Ha ceilssyuq
a handle	làq - jò	ceiqyyuq	2	Ha 'hoe handle'
bone	sjhà - jò	saqyyuq	2	
gong	bö - lò	bbyu'lyu	3	

Akha -m / Hani -ao

	Akha	Hani	* Tone	Comments
work	ín	aol	1	
now	njm ím	niaoqaol	1	Lewis njm ím
heaven	m̄	aoq	2	
sunshine	m̄-tshá~	aoqcal	2	
	ù-tshá			
evening	m̄-tjíq~	aoqjivq	2	
	ù-tjíq			
fence	khím	kaolddaol	1	
crossroad	gá-tshím	ggalcaol	1	
shed, shack	já-tshím	xalqaol	1	
bridge	ló-dzím	laolzzaol	1	
Thai, Shan	bí-tjhím~	aqcaoq	2	
	mí-tjhím			
short	njm	niaol	1	
now	njm ín	niaoqaol		Ak *3, Ha *2
a turn, round	dím	ddao	1	Ak òq làq òq dím 'to and fro'
wear	dím	ddao	3	
log	dím - ma	ddaoqma	2	
rice ears	tjhé nm̄	ceilnaol	1	
sesame	nín-shí	naoqseil	2	
mushroom	áhm̄	ciiqaol	1	Ha 'a kind of mushroom'
bear	xhà - hm̄	haoqaol	1	

	Akha	Hani	* Tone	Comments
buttocks	dò- <u>xhìm</u> ~ dò-dàŋ	ddaoq <u>kaoq</u>	2	NB Ha initial
bowl	<u>xhìm</u> -mà	<u>haoqmaq</u>	2	
be allowed to	xhìm	hhaq	2	Irregular
pillow	ù- <u>γìm</u>	hhaoq	2	
otter	y- <u>sjhím</u>	<u>eelsaol</u>	1	
iron	sjhím	saol	1	
iron tripod	<u>sjhím</u> khý	<u>saolkeel</u>	1	
peafowl	<u>sjhím</u> -dô	<u>saolddyuq</u>	1	
three	shím	saol	1	
use, spend	jìm~ zìm	<u>ssaoq</u>	2	
warm	lím	laol	1	

Akha -aq / Hani -ao, -o, -ee

	Akha	Hani	* Tone	Comments
sell	àŋ	aoq	2	
hair (on head)	tshé- <u>kháŋ</u>	<u>ceilkaol</u>	1	
clf. for long things	kháŋ	kaol	1	
thread	shà- <u>kháŋ</u>	<u>saqkaol</u>	1	
heavy	khaŋ	xao	3	
clear water	gáŋ	<u>eelggaol</u>	1	Ak also 'clever'
spear	gàŋ	ggaoq	2	
liver	<u>sjhà-tshàŋ</u>	caoq	2	
belt	dzò- <u>dzàŋ</u>	<u>jjuqzzaoq</u>	2	
a bundle	dzàŋ	zzaoq	2	
do, make	djáŋ	zzaol	1	
celebrate N. Y.	gá <u>tháŋ tháŋ</u>	<u>ggaltaoltaol</u>	1	
thousand	tháŋ	taol	1	
maggot	luq-tháŋ	<u>luvtaoq</u>	2	
wing	àdáŋ	<u>aqddao</u>	1	
be (e.g. of a road)	dáŋ	ddao	1	
back, spine	<u>dáŋ-thé</u>	<u>ddaoaltei</u>	1	
hill field	<u>dáŋ-já</u>	<u>ddaoalyal</u>	1	
be (e.g. of liquids)	dàŋ	ddaoq	2	
bottom, lower part	dàŋ	<u>ddaoqddaoq</u>	2	Ak já-dàŋ 'lower part of field', dò-dàŋ 'buttocks'
sun, day	náŋ	nao	3	
day before yesterday	hù-náŋ	<u>huqnao</u>	3	

	Akha	Hani	* Tone	Comments
soft, small, tiny	nàŋ	naoq	2	
full	bjaŋ	bbiao	3	
name	tshó <u>mjáŋ</u>	colmiaol	1	
ripen	mjaŋ	miao	3	
indigo	mjàŋ	miaoq	2	
open	phaŋ	pao	3	
bank of earth between fields	da- <u>báŋ</u>	ddal <b>bbao</b> l	1	Ak 'rail'. Cf. also Ak də-jaŋ da-báŋ 'a bund in a terraced rice field'
clf. for hollow things, rainfall	bàŋ	bbaoq	2	
box	bàŋ-kəq	<u>bbao</u> ggev	2	
nest, hole; troublesome	bàŋ	bbeq	2	NB Ha vowel
water bucket	i- <u>báŋ</u>	<u>eel</u> bbaoq	2	Ak 'bamboo section for carrying water'
long	tnáŋ	mol	1	NB Ha vowel
horse	màŋ	moq	2	"
wildcat	áháŋ	a <u>lha</u> ol	1	
area	mí- <u>xhàn</u>	<u>mil</u> haq	2	
clothes, shirt	phé- <u>xhàn</u>	<u>peil</u> haq	2	
hard, stiff	ráŋ	hhaol	1	
father's sister's husband, elder sister's husband	àsjhàn	a <u>qsa</u> q	2	
beeswax	bjà- <u>sjhàn</u>	<u>bbiaq</u> saq	2	
owner	jə- <u>sháŋ</u>	y <u>olsa</u> ol	1	
guest	dà- jaŋ	ddaq <u>yao</u>	3	
hot (water)	láŋ	e <u>ella</u> ol	1	

Akha -aq / Hani -av

	Akha	Hani	*Tone	Comments
comb, harrow	kaq	gav	HS	
crossbow	<u>kaq təq</u>	<u>gavdev</u>	HS	Ak 'small crossbow'
feel cold	gaq	ggav	HS	
connect	tsàq	zavq	LS	
a drop	dzaq	zzav	HS	
rope	átjaq	alzav	HS	
rat	ho- <u>tjàq</u> ~ <u>xoq-tjàq</u>	<u>huzavq</u>	LS	
boil, cook	tjàq	javq	LS	
have, be (inanimate)	djaq	jjav	HS	
well cooked	djàq	jjavq	LS	
sharp	taq	dav	HS	
upside	làq <u>taq pho</u>	<u>aqdavpyu</u>	HS	
chisel	tàq	davq	LS	
climb up, up	daq	ddav	HS	
black	naq	<u>navjovqnei</u>	HS	NB SpHa <u>nájtjòqne</u> . Probably loses its laryngeation in close juncture.
deep	nàq	navq	LS	
get bad, ruin	pjaq	bbiav	HS	Ak 'tear down, fall down'. Cf. LTSR 64 PLB *pyak~*byak~*?byak
kind of coin	bjaq	bbiav	HS	
sow	bjaq	bbiav	HS	
fold	<u>b_jaq dám</u>	bbiavq		Ak *HS, Ha *LS
board	bjàq	bbiavq	LS	
how many	ámjaq	<u>halmiav</u>	HS	
eye	<u>mjaq-nyq</u>	miav	HS	
tie	pàq tèq	<u>bavqdovq</u>	LS	
cabbage	γò-pàq	<u>hhoqbavq</u>	LS	
carry on a pole	bàq	bbavq	LS	Ha also 'lift, carry with both hands, take'
shoulder	<u>bàq-phu</u>	<u>bbavqdavq</u>	LS	
they	àjòq <u>màq</u>	<u>aqyoqmaqv</u>	LS	
adult	tshò- <u>xaq</u>	<u>colhav</u>	HS	
breathe	sàq	savq	LS	
sweep	jaq	yav	HS	
weave	zàq	hhavq	LS	
go down	zàq	ssavq	LS	
pig	àzàq	<u>aqhhavq</u>	LS	
outside	<u>làngjí</u>	<u>laqñil</u>		Ak *LS, Ha *2
branch	ùlliq	<u>allavq</u>	LS	
hand	àlliq	<u>aqlavq</u>	LS	
smell	bèq <u>lìq</u>	<u>bbeavlavq</u>	LS	
a time	laq	lavq	LS	

Akha -iq / Hani -iv/-iiv

	Akha	Hani	* Tone	Comments
evening	m-tjiq~ ù-tjiq	aoqjivq	LS	
able	tjiq	jivq	LS	
turbid, muddy	diq	ddiv	HS	Ak 'curly, twisted'
give	bîq	bbivq	LS	
close (eyes)	miq	miv	HS	Ak also 'extinguish fire'
seven	sjîq	sivq	LS	
wipe	siq	siiv	HS	
firm	zîq	ssiivq	LS	

Akha -uq / Hani -uv

	Akha	Hani	* Tone	Comments
egg	ja-uq	a <u>lu</u> uv	IIS	
afraid	guq	gguv	HS	
sew	gùq	gguvq	LS	
rice ball	hò tsuq	hoqzu <u>v</u>	IIS	
water	í-tjuq	wu <u>lju</u> vq	LS	
rotten	bùq	bbuvq	LS	
inhale	sjuq	suv	HS	
sleep	jùq	yiu <u>v</u> q	LS	
maggot	luq-thàij	luvtaoq	IIS	
be an earthquake	mi' luq luq	millu' <u>lu</u>		Ak *IIS, Ha *3

Akha -oq / Hani -uv, -ov

	Akha	Hani	*Tone	Comments
below	dàq <u>oq</u> pho	aq <u>hhuv</u> pyu	HS	
six	kòq	guvq	LS	
build (house)	tsoq	zuv	HS	
build, join	tsòq	zuvq	LS	
come out	doq	dduv	HS	
make a fire	dòq	ddovq	LS	
torch	dòq	alddovq	LS	Ak 'make a fire'
monkey	á <u>mjòq</u>	al <u>miuv</u> q	LS	
write	bòq	bbuvq	LS	
fall down, drop	ga <u>mòq</u>	muvq	LS	Ak 'bow one's head'
wear (hat)	xoq	huv	HS	
forked stick	<u>xoq pjèq</u>	<u>hubie</u> vq		Ak *HS, Ha *3
crooked (road)	xòq	ggal <u>hhuv</u> q	LS	Cf. Ak jè-xòq 'sickle', ga xòq 'bend over'
return	γòq	hhuvq	LS	
year	xòq	huvq	LS	
door	<u>yòq-xhè~</u> oq-xhè	<u>hhohe</u> iq		Ak *HS, Ha *3
guard	lòq	luvq	LS	
enough	lòq	luvq	LS	

Akha -eq / Hani -eiv

	Akha	Hani	*Tone	Comments
bark (of dogs)	tsèq	zeivq	LS	
cold	tsèq	zeivq	LS	
compare	tjeq	jeiv	HS	
wild banana	<u>ŋa-djèq</u>	<u>alzzei</u> v	HS	
catch	njèq	nieivq	LS	
satisfied, eaten one's fill	dèq	ddeiv	HS	
ahve	dèq	ddeivq	LS	
cut (a small thing)	pjèq	bieiv	HS	
braid	pjèq	bievq	LS	NB Ha vowel
mashed, pulpy; chop, mince	bjèq	bbieiv	HS	
open up, split	bèq	bbeivq	LS	
smell	<u>bìq-làq</u>	<u>bbeivla</u> vq	LS	
hungry	mèq	meivq	LS	
cut, break	xèq	heiivq	LS	
pear	sjeq	seiiv	HS	
kill	sèq	seivq	LS	
whiskers	bà <u>sèq sèq</u>	<u>bbaqse</u> il		Ak *HS, Ha *1
blossom	jèq	yiev	HS	Probably misspelt in the Hani Wordlist. Should be yeiv.
drunk	jèq	yevq	LS	NB Ha vowel. On tape pronounced [jèq]
erect	jèq	xeivq	LS	
take off, undress	leq	leiiv	HS	

Akha -ɔq / Hani -ov, -aoq

	Akha	Hani	Tone	Comments
ripe (fruit)	òq	ovq	LS	
lines of hand	l̄aq- <u>kɔq</u>	lavq <u>gov</u>	HS	
hurt, bite	kòq	govq	LS	
bedbug	àgɔq	aqq <u>gov</u>	HS	
very black	naq <u>tjòq</u> i	nav <u>joqvnei</u>	LS	
man's leggings	khý- <u>tɔq</u>	keeld <u>ov</u>	HS	
tie	pàq <u>tòq</u>	bavqd <u>ovq</u>	LS	
put on, place, fasten	dɔq	ddov	HS	Ha 'fasten a flower'
sandals	shè- <u>nɔq</u>	seivq <u>naov</u>	HS	
lungs	sjhà- <u>pòq</u>	bovq	LS	
want to	mòq	movq	LS	
inside of hand	l̄aq- <u>xɔq</u>	lavq <u>hov</u>	HS	
hole	dù- <u>xòq</u>	dduq <u>hovq</u>	LS	
well, water source	ló- <u>xòq</u>	lol <u>hovq</u>	LS	
needle	àγòq	aqh <u>hovq</u>	LS	
rub, stroke	sjɔq	sov	HS	
3rd pers. pron.	àjòq	aqy <u>ovq</u>		Ak * LS, Ha * 2
dry in sun	lòq	lovq	LS	

Akha -yq / Hani -iv/-eev, -eiv

	Akha	Hani	Tone	Comments
joint	átsyq	alzivq	LS	
elbow	l̄aq- <u>tsyq</u>	lavq <u>zivq</u>	LS	
itch	dzyq	zziv	HS	
a little	átjyq	alziv	HS	
soak	dyq	ddeev	HS	
seed, kernel	ányq	alneev	HS	
sink	ga n̄yq	neevq	LS	
numb	byq	aqbbieiv <u>bbieiv</u>	HS	Irregular vowel correspondence
new	sjyq	sivq	LS	
elder sibling	àjyq	aqyivq	LS	Ha 'elder sister'. NB Ha vowel

Akha -əq / Hani -ev

	<b>Akha</b>	<b>Hani</b>	* <b>Tone</b>	<b>Comments</b>
box	bàŋ- <u>kəq</u>	bbaoq <u>ggev</u>	HS	
arrive	kəq	hev	HS	
pheasant	gèq	ggevq	LS	Ha 'silver pheasant'
pick, pluck	tsəq	zəv	HS	
crossbow	kaq <u>təq</u>	gav <u>dev</u>	HS	
cut, hack	dəq	ddev	HS	Ak 'small crossbow'
salt	shà- <u>dəq</u>	caqd <u>devq</u>		Ak * HS, Ha * LS. NB Ha initial
change, become	pjèq	bievq	LS	
lick	mjèq	mievq	LS	
shoot; fluff	bəq	bbev	HS	
gun, rifle	mí- <u>bəq</u>	miqb <u>bev</u>	HS	
peel off	ləq	levq	LS	

## App. 2.a

## HANI OPEN SYLLABLES

Possible syllables in the Hani Wordlist with conversion into the Akha transcription system

Hani finals	a	i	u	e	o	ei	ao	ee	ii	yu
Hani initials										
k	kha		khu	kha	kho		kho	khy		khui
gg	ga		gu		go	gɛ	gɔ	gy		gui ?
ng	ŋa						ŋɔ	ŋy		ŋo
c	tsha	tshy	tshu	tshə	tsho	tshɛ	tshɔ		tshi	tsho
zz	dza	dzy	dzu		dzo	dze	dzo		dzi	dzo
q	tjha	tjhi	tjhu	tjhə	tjho	tjhɛ	tjhɔ			tjho
jj	dja	dji	dju		djo	dje	djo			
ni	nja		nju			nje	njo			
t	tha		thu		tho	thɛ	thɔ			tho
dd	da	dɪ	du	də	do	dɛ	dɔ	dy		dö
n	na	ni	nu		no	nɛ	nɔ	ny		nö
pi	pjha		pjhu			pjhɛ	pjhɔ			
bbi	bja		bju		bjo	bje	bjo			
mi	mja		mju	mjə		mje	mjo			
p	p̥ha	phi	p̥hu	p̥hə	p̥ho	p̥hɛ	p̥hɔ	p̥hy		p̥ho
bb	ba	bi	bu	bə	bo	bɛ	bɔ	by		bö
m	ma	mi	mu		mo	me		my		
h	xha		xhu	xhə	xho	xhɛ	xhɔ	xhy		xhö
hh	γa		γu	γə	γo	γɛ	γɔ			γö
s	sha	shy	shu	shə	sho	she	shɔ		shi	shö
x	s̥jha	s̥jhi	s̥jhu		s̥jho		s̥jhɔ			
y	ja	i	ju		jo	jɛ	jɔ			jö
ss	za	zy	zu		zo	zɛ	zɔ		zi	zo
l	la	li	lu	le	lo	le	le	ly		lo
w			u							
zero	a			ə	o	ɛ	ɔ	y		ö

## HANI CLOSED SYLLABLES

Possible syllables in the Hani Wordlist with conversion into the Akha transcription system

Hani finals	a v	i v	u v	e v	o v	e i v	a o v	e e v	i i v	y u v
Hani initials										
g	kaq		kuq	kəq	koq					
gg	gaq		guq	gəq	goq					
ng	ŋaq									
z	tsaq	tsyq	tsuq	tsəq	tsoq	tsɛq				tsiq
zz	dzaq	dzyq	dzuq		dzoq	dzeq				dziq
j	tjaq	tjiq	tjuq	tjəq	tjoq	tjɛq				
jj	djaq	djiq								
ni	njaq		njuq			njəq	njɔq			
d	taq	tiq	tuq	təq	toq	təq				
dd	daq	diq	duq	dəq	doq	dəq	dɔq			
n	naq	nip	nup			nəq	nyq			
bi	pjaq			pjəq						
bbi	bjaq			bjəq	bjoq	bjɛq				
mi	mjaq		mjuq	mjəq		mjɛq				
b	paq		puq		poq	pəq				
bb	baq	biq	buq	bəq		bəq		byq		
m	maq	miq	muq		moq	məq		myq		
h	xaq		xuq	xəq	xoq	xəq				
hh	γaq		γuq	γəq	γoq	γəq				
x	sjaq				sjoq	sjəq				
s	saq	syq	suq	səq	soq	səq		sɪq	soq	
y	jaq	iyq		jəq	joq	jəq	jɛq			
ss	zaq	zyq	zuq			zəq		ziq		
l	laq	liq	luq	ləq	loq	ləq		lyq		
w			uq							
zero				əq	oq			ōq		