THE NUNG AN LANGUAGE OF VIETNAM: STEPCHILD OR ABERRANT SON?

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1.1 Nung An's position

Nùng[1] is one of the officially recognized minority languages of Vietnam. Nùng speakers live predominately in the northeast corner of Vietnam on the Chinese border. While outsiders consider the Nùng people as one cohesive group, the speakers of this language divide themselves into groups using at least 12 different names such as Nùng Cháo[2], Nùng Inh, Nùng Hù Lai. Many of the present day names are based on the area of China from which they came; for example the Nùng Cháo people are from Longzhou, Nùng Phàn Slình[3] from Wanchengzhou, Nùng Inh from Longyinzhou[4] and the Nùng An from Anjiezhou (or Ân Kết in Vietnamese) (Edmondson 1994:148, Viện Dân Tộc Học 1978:201). This agrees with reports from the Nùng themselves who claim to have migrated from China starting from about 10 generations ago. Other names are used by outsiders based on a distinctive feature of clothing or culture.

A more compelling reason not to consider the Nùng as one group has to do with their linguistic differences. There are clearly differences in dialect between the different Nùng groups, but Nùng An has characteristics which set it apart from the other groups calling themselves Nùng. This is also borne out by what the Nùng themselves claim: Cháo, Inh, and Phàn Slình speakers say they can speak together with varying degrees of difficulty, but when they speak to Nùng An, they change to Vietnamese. The Nùng An say the same. The Nùng themselves perceive a wide linguistic gulf and informally put Nùng An into a class of its own.

Probably the first mention of Nùng An in the literature is was made by André Haudricourt (1960). He used Nùng An data from a survey done in 1938 by the Ecole Francais d'Extrême Orient. This survey gave word lists from a wide range of areas and lects but the word lists did have their limitations. The mode of transcription was not consistent and often incomplete. This was particularly true of tone descriptions. Despite this, Haudricourt could clearly see that four particular languages in Vietnam, though related to the Tai languages, did not fit into the same category as the other Tai-Kadai members Tày and Nùng. He put Nùng An and the other languages, Yay, Cao Lan and Ts'un-wa, into one category he called "Yay."

Since Haudricourt's initial report, a broader view of Tai languages has been developed. Fang-kuei Li in "Handbook of Comparative Tai" (Li 1977) divided the Tai branch of the Tai-Kadai language family into three main groups: Southwestern (SW), Central (CT) and Northern (NT). He also gave criteria to describe each group. Haudricourt's ▢Yay would be comparable to what Li called Northern Tai (Strecker 1985:479).

Work in the Tai languages found in northeast Vietnam include Tày (Day 1966 and Đoàn Thiện Thuật 1996), Nùng Phàn Slình (Vy 1982), what Gedney called Western Nùng (Gedney 1995) and Nùng Cháo, and Nùng Inh (Nicolson 1998). Most recently Jerold A. Edmondson also has done

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[1] Cño is pronounced [ca:u] with a high-rising tone. Inh is pronounced [i:ɲ] or [i:ŋ] with a mid-level tone.

[2] Phμn Slxnh is pronounced [fa:n ɫiɲ] with low-falling tones on both words.

[3] Vietnam sources list the origin as Long'an (Hoμng 1992:20, Ľ and §ng 1968: 31).

[4] In 1996 the provinces were changed. The discussion in this paper uses the provinces boundaries as they were at the time of the 1989 census.

some work in this area (Edmondson: forthcoming). All clearly show evidence that both Tày and the other Nùng dialects are members of the CT of the Tai branch of the Tai-Kadai language family. But Nùng An data recently collected in Cao Bằng province shows phenomena different from what is expected for a CT language and raises questions as to whether Nùng An is indeed also a member of the CT subgroup as are the other Nùng dialects.

This paper examines the following question: Is Nùng An, as its name might suggest, a member of the Central Tai subgroup of Tai languages with some unusual quirks, i.e. an "aberrant son," or is it, as Haudricourt claims, a Northern Tai language that over the years has come to be called Nùng, i.e. a "stepchild," as it blended in with the CT-speaking neighbors that now surround it?

1.2 The NUng Context

The northeast corner of Vietnam is dominated by Tai languages. The Tụy are the most numerous of the language groups in this area with more than one million speakers. The Ṇng are the second largest group found in the area with 705,709 speakers according to the 1989 census.

The Nùng are found mainly in Lạng Sơn and Cao Bằng provinces, but there are smaller numbers found in Lào Cai, Hà Giang, Tuyên Quang, Bắc Thái and Hà Bắc provinces[1]. The author found Nùng An in three main areas: Hà Quảng district in Nội Thôn commune (xã) on the China border and in Tự Do commune Quảng Hoà district. Quảng Hoà district appears to be the major Nùng An area. Nùng An speakers there reported that Phúc Sen, Đoàn Khôn, Quốc Dân and Chí Thảo communes surrounding Tự Do commune made up the main Nùng An area. This agrees with what others have reported. Edmondson (forthcoming) reports some in neighboring Phúc Sen commune. The survey done in 1938 by the Ecole Francais d'Extrême Orient also reported Nùng An in Đoàn Khôn commune.

A third group that called themselves Nùng An was also found in Ba Bể district in Cao Trĩ commune not far from Ba Bể Lake. They claimed to have moved from eastern Cao Bằng more than 60 years ago and that their ancestors had originally come from China more than a hundred years ago. The data from Ba Bể seemed different and is not discussed here. All these are shown in the map below.

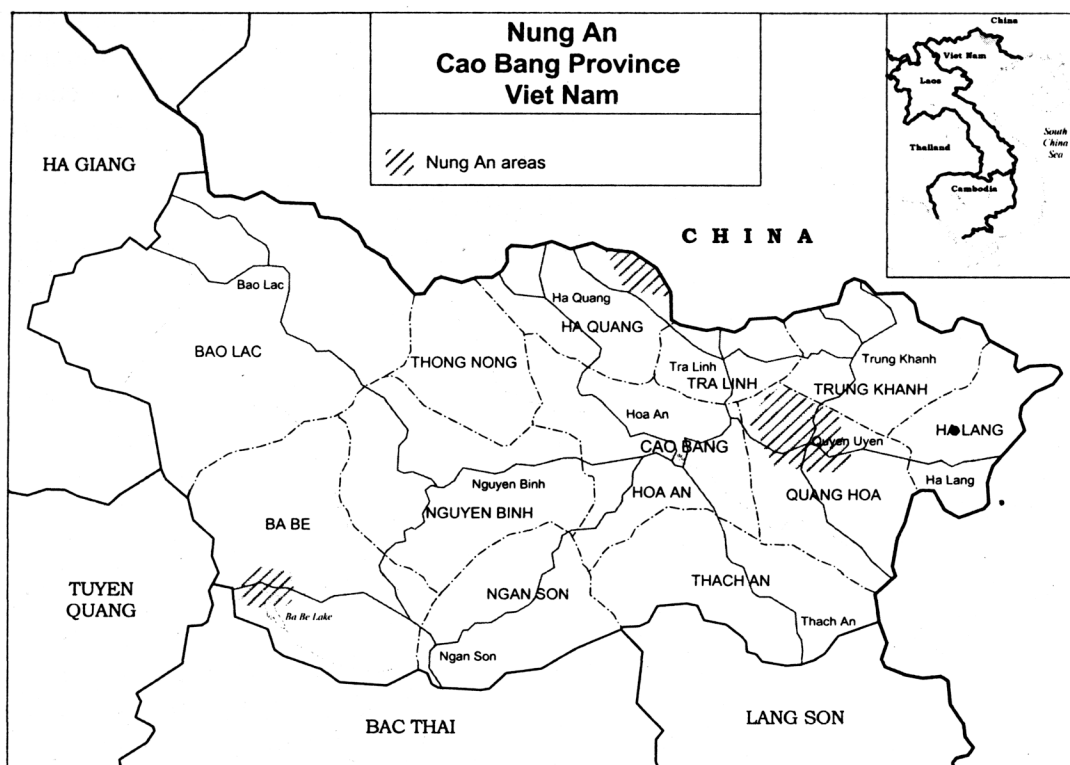
[1] Lungchow is now called Longzhou.

Figure 1. Map of Nùng An areas

Using the geographical points listed above, personal communications from the Nùng An themselves and the 1989 census at district level, the author estimates there to be about 30,000 Nùng An speakers, less than 5% of the total Nùng population.

1.3 The Data

Evaluating Nùng An data is based on the criteria that Li (1977) used to make the divisions between NT and CT:

Tone differences:

        Tone changes

        Tone contours that include voice quality

Segmental differences

Lexical differences

I discuss each of these points below.

The data used in this paper are from word lists taken in Cao Bằng province in 1994. The word lists were short with only 380 words, but they gave evidence for a wide range of features ranging from tones and segments to lexical items to use for comparison purposes. The Nùng An words were compared to data from Li (1977), Gedney (1994, 1991a, 1991b) and others, and data the author also collected in neighboring Lạng Sơn province and other locations in Cao Bằng.

Gedney's (1972) system of tone 10 tone boxes was also used to compare tone systems across languages. His system is based on the view that present day tone contours are residual frequencies of segments that have been lost. The lower frequency caused by voiced consonants caused proto-tones A, B, C, D to split into different tones (Series 2-usually lower). The D tone, which only occurs in syllables that end in p, t, k and □, split further depending on vowel length. See the Figure 2 below.

Lexical Items that originally had	*A1	*B1	*C1	*D1S	*D1L	Series 1

aspirated, voiceless and glottalized				(short vowel)	(long vowel)	tones
Lexical Items that originally had **voiced** consonants	*A2	*B2	*C2	*D2S	*D2L	Series 2 tones

Figure 2. Tone Boxes

Each reflex from the Nùng An, Cháo, Inh, and Phàn Slình data is followed by a description of its tone contour. This description is based on Chao's method of describing tone contours on a scale to 1 to 5 where 5 represents the highest level. A tone contour that was low-rising, for example would be described as 13. Data in this paper may include tone contours with as many as four points. The description of the tone contours may also include additional information about voice quality that should be considered as part of the tone. Underlining is used to indicate breathiness or laryngealization that occurs somewhere over the syllable. A glottal stop after the tone numbers indicates a final glottal stop as part of the pitch contour.

2. Tone Evidence

2.1 Tone series changes

NT languages have been characterized by having a shared group of cognates in which the tone of one series becomes like the tone of the other series within the same tone category (changes of the number in the tone notation). For example, cognates that from a historical point of view are expected to have a Series 1 tone now have a tone that is like Series 2 tone. The opposite may also be true. These type changes are sometimes called "flip-flop" and hint at different NT segment development that caused the series to change from that of CT languages. Nùng An displays the changes considered to be a characteristic of NT. See the Chart 1 below:

Gloss	CT	CT	CT	NT	NT	NT	Nùng An	Nùng An
	Nùng Cháo	Nùng Inh	Li Lung-chow[1]	Li Poai	Li Wu-ming	Gedney Yay	Quảng Hoà	Hà Quảng
'to bind'	pʰŭk35 D1S= D1L	pʰŭk55 D1S	phuk55 D1S	šuk44 D2S	x	suk33[2] D2S	sŭk32 D2S	x
'to come'	ma:31 A2	ma:31 A2	maa31 A2	ma24 A1	x	ma33 A1	ma:2131 A1	ma:341 A1
'sugar'	tʰɯ:ŋ33 A1	tʰɯř ŋ25 A1	thɨ̈iŋ33 A1	fïiŋ31 A2	x	tɯaŋ454 A2	tɯ:ŋ32 A2	tɯ:ŋ31 A2
'to arrive'	tʰŭiŋ33 A1	tʰŭiŋ25 A1	thï ŋ33 A1	fi ŋ55 A2	x	taŋ454 A2	tăŋ32 A2	tăŋ31 A2
'animal'	tu:33 A1	tu:55 A1	tuu33 A1	tuu55 A2	x	tua454 A2	tu:32 A2	tu:31 A2

[1] Gedney originally used just a tone box number with items on his word lists. Hudak (Gedney 1991b: xx) later gave numeric descriptions and they are used here to standardize the data given.

[2] Some authors do not give a description of the tone rather a number representing the tone box that it belongs to. In those cases the comparable Gedney code has been put in parentheses.

'bean'	tʰuː35 B1	tʰuɤ23 B1	thuu55 B1	tuu31 B2	x	tua41 B2	tu:42 B2	tu:54ʔ B2
'ear'	huː33 A1	huː25 A1	huu33 A1	lĩi55 A2	rĭi31 A2	rɯa454 A2	ʂɯː32 A2	rɯː31 A2
'rightside'	ɬaː33 A1	tʰʷaː354 A1	ɬaa33 A1	kwaa55 A2	x	kwa454 A2	ka:32 A2	kʷa:31 A2
'ten'	ɬĭp35 D1S	sĭp55 D1S	ɬip55 D1S	šip55 D2S	šip D2S	sip33 D2S	sĭp32 D2S	sĭp31 D2S
'bitter'	kʰŭm33 A1	xɤm354 A1	khum33 A1	ham55 A2	kwa31 A2	ham454 A2	hăm32 A2	xăm31 A2
'son-in-law'	kʰɯi33 A1	kʰɯɤ̆i25 A1	khĩii33 A1	kĩii55 A2	xăm31 A2	kɯay454 A2	kɯi32 A2	kɯː31 A2
'rice'	kʰău24 C1	kʰău213 C1	khau24 C1	xău44 C2	xău55 C2	kaw45 C2	hău453ʔ C2	□□□□□ □□ □□

Chart 1. Examples of NT tone changes present in Nùng An

There is one example in which Nùng An does not completely follow the NT form. (Chart 2 below). In the case of 'swallow,' the Quảng Hoà dialect follows the CT form, while speakers from Hà Quảng have the Series 1 C1 tone as in NT. But Gedney's Yay, an NT language, also shows an exception, hence in this case this exception does not disqualify Nùng An as a NT language.

Gloss	CT	CT	CT	NT	NT	NT	Nùng An	Nùng An
	Nùng Cháo	Nùng Inh	Li Lungchow	Li Poai	Li Wuming	Gedney Yay	Quảng Hoà	Hà Quảng
'swallow'	nĭn32ʔ C2	nuăn42ʔ C2	ñi n24 C2	ñi n44 C1	ʔdɯn55 C1	dɯn45 C2	ɗɤn453ʔ C2	ɗɤn35 C1

Chart 2. Tone changes in 'swallow'

Li (1977) identifies the word 'palm (of the hand)' as a special case. He claims that although it has a B1 tone in SW and NT, in CT it has C1. But some Northern Zhuang (NT) data from Wuming provided by Margaret Milliken shows that 'palm' with a C1 tone is not necessarily an exclusively CT characteristic. See Chart 3 below:

Gloss	CT	CT	CT	CT	CT	NT	NT	NT	Nùng An	Nùng An

	Nùng Cháo	Nùng Inh	Li Lungchow	Gedney Nùngming	Gedney West. Nùng	Li Poai	Li Wuming	Milliken Wuming	Quảng Hoà	Hà Quảng
'palm-hand'	pʰa:24 C1	pha:213 C1	phaa24 C1	phaa25 C1	phaa22 C1	x	x	pa55 C1	pha:34 C1	pʰa:35 C1

Chart 3. Tone development of 'palm'

2.2 Tone category changes

Li also gives cases where the line between NT and CT is drawn by examples of where tones on certain words changed to a different proto-tone category (changes of the letter of the description). As with NT tone series changes, Nùng An identifies itself more as a NT language rather than a CT language. See Chart 4 below.

Gloss	CT	CT	CT	NT	NT	NT	Nùng An	Nùng An
	Nùng Cháo	Nùng Inh	Li Lungchow	Li Poai	Li Wuming	Gedney Yay	Quảng Hoà	Hà Quảng
'to weave'	tăm35 B1	tăm23 B1	tam55 B1	tam33 C2	x	tam13 C1 C2	tăm34	tăm35 C2
'to boil'	tŭm24 C1	tŭm213 C1	x	tum22 B1	x	tum41 B1	tŭm31? B1	tŭm42? B1
'wide'	kwa:ŋ24 C1	kwa:ŋ213 C1	kwaaŋ24 C1	kwaaŋ22 B1	kwaŋ24 B1	kwaaŋ41 B1	ka:ŋ31? B1	kʷa:ŋ42? B1
'flesh'	nu32? C2	nu42? C2	n̈ii?21 C2	noo31 B2	x	no41 B2	nɔ:42 B2	no:54? B2
'few, little'	noi32? C2	nɔi42? C2	nooi?21 C2	nooi31 B2	x	noy41 B2	nɔ̌i42 B2	noi54? B2
'sunshine'	ɗɛ:t35 D1S=D1L	ɗɛ:t23 D1L	deet55 D1L	x	ʔdit24 D1S	dit13 D1S	ɗit45 D1S	ɗit45 D1S

Chart 4. Examples of tone category changes

In the case of the word 'shiver,' Li tentatively writes that Wuming shows an A2 tone where both CT and NT agree in having B1. Nùng An, though seems to follow Wuming's particular quirk by having an unexpected A2. Lungming (Longming) and Nùng Inh also have A2. This probably means that 'shiver' is not a reliable indicator of a NT language.

Gloss	CT	CT	CT	CT	CT	NT	NT	NT	Nùng An	Nùng An
	Nùng Cháo	Nùng Inh	Li Lung chow	Gedney Lingming	Gedney Western Nùng	Li Poai	Li Wu-ming	Gedney Yay	Quảng Hoà	Hà Quảng
'shiver'	leːn35 B1	ɬaːn31 A2	ɬin11 (?) B1	san21 A2	san21 B1	ɬan31 B1	θan31 A2?	θan22 B1	ɬăn32 A2	ɬăn31 A2

Chart 5. Wuming and Nïng An share the same exception in 'shiver'

There are other clearly CT languages that show occasional changes in tones usually thought of as NT traits. In Chart 6 below there are some examples.

Gloss	CT	CT	CT	CT	NT	NT	NT	Nùng An	Nùng An
	Nùng Cháo	Nùng Inh	Li Lung chow	Gedney CT Dialects (1995)	Li Poai	Li Wu-ming	Gedney Yay	Quảng Hoà	Hà Quảng
'wing'	pik35 D1S	pĭk55 D1S	pik55 D1S	Ningming piik21 D2L	fit44 D2S	fiat13 D2L	fɯat41 D2L	fɯːt42 D2L	fɯ̆t54 D2L
'bone'	ɗŭk35 D1S	ɗŭk55 D1S	duk55 D1S	Ningming duuk21 D1L	nook22 D1L	ʔdök24 D1L	dok13 D1S	ɗɔːk31? D1L	ɗoːk42ʔ D1L
'deaf'	nuuk35 D1L	nuɤk55 D1L	nuuk55 D1L	West. Nùng nuk21 D1L	nuk55 D1S	x	nuk13 D1S	nŭk45 D1S	nŭk45 D1S

Chart 6. Examples of proposed NT tone category changes happening in CT languages

In the case of 'wing,' although there is an example of a CT language (Ningming) having a lengthened vowel and a change in the tone category, it does not have the tell-tale initial consonant /f/, as does Nùng An. Notice also that Gedney's Yay, a clearly NT language, has the CT form of 'bone,' while Ningming, an accepted CT language, has the NT form. Although Li considered 'bone' a marker for NT versus CT, it does not appear to be a consistent indicator.

In NT languages, the Chinese loan word 'to plane, shave' should have a B2 tone, but there is a difference in the two different Nùng An areas sampled. Quảng Hoà has the CT form and Hà Quảng has the NT form. Notice though that there is another CT language that has the NT form of B2. The fact that another CT language has B2 suggests that the presence of the NT form in Nùng An does not provide evidence that it should be considered NT.

Gloss	CT	CT	CT	CT	NT	NT	NT	Nùng An	Nùng An
	Nùng Cháo	Nùng Inh	Li Lung chow	Gedney Lung ming	Li Poai	Li Wu-ming	Gedney Yay	Quảng Hoà	Hà Quảng
'to shave, plane'	pa:u31 A2	pa:u31 A2	paau A2	paaw11 B2	paau31 B2	x	paaw41 B2	pa:u32 B2	pa:u54ʔ B2

Chart 7. Examples of tone category changes in 'to plane, shave'

Li lists 'tomorrow' with a D2L tone, but in SW and CT the tone has become D2S. Nïng An has the NT form of D2L, but this does not necessarily constitute evidence that it is a NT language since other examples of CT languages having D2L also were found in Gedney's data. See Chart 8 below.

Gloss	CT	CT	CT	CT	CT	NT	NT	NT	Nùng An	Nùng An
	Nùng Cháo	Nùng Inh	Li Lung chow	Gedney Western Nùng	Gedney Lung ming	Li Poai	Li Wu-ming	Gedney Yay	Quảng Hoà	Hà Quảng
'tomorrow'	pʲŭk31 D2S	cŭk33 D2S	pjuk31 D2S	pɤk31 D2L	cok11 D2L	šook31 D2L	x	sok41 D2L	sɔ:k42 D2L	so:k54 D2L

Chart 8. CT languages with NT tone for 'tomorrow'

In the Chart 9 below, the word 'child' seems to be a special case. Li reports that SW languages have the tone category D2L, while both NT and CT have D2S. However, it appears that additional data from other CT Nùng language varieties in Vietnam (Nùng Cháo, Nùng Inh, Western Nùng) have D2L (like SW forms). They do not have D2S as Li predicted. Nùng An is divided: Quảng Hoà has the expected D2S, but Hà Quảng follows the other Nùng dialects with D2L. Looking across the language varieties it does not appear that the there is a firm rule as to what tone category 'child' will have based on whether it is CT or NT.

Gloss	SW	CT	CT	CT	CT	CT	CT	NT	NT	NT	Nùng An	Nùng An
	Li Siam	Li Lung chow	Nùng Cháo	Nùng Inh	Ged. West. Nùng	Milliken Long An	Ged. Lung ming	Ged. Yay	Milliken Wuming	Milliken Qiubei	Quảng Hoà	Hà Quảng
'child'	luuk41D2L	luk31 D2S	lu:k21 D2L	lŭk31 D2L	lok31 D2L	lok42 D2L	lok11 D2L	lɯk33 D2S	lɯk33 D2S= D2L	lək22 D2L	lŭk32 D2S	lŭk54 D2L

Chart 9. 'Child' varieties in the tone category

2.2 Voice quality as part of the tone

Another defining characteristic regarding tone is voice quality that accompanies the pitch contour. Edmondson (forthcoming: 6) claims that this is a trait particular to CT. Nùng An clearly has this trait. Tone B1 and B2 in both Quảng Hoà (31☐ and 42) and Hà Quảng (42☐ and 54☐) have a pitch contour that includes either a final glottal (☐) or has laryngealization or breathiness (underlining). Final glottal stops also occur with the C2 tone.

In summary, the examples available in the Nùng An word lists demonstrate tone changes that consistently follow NT. The cognate 'swallow' shows a possible exception, but only one of the two Nùng An dialects has the CT form. However, the one CT characteristic that Nùng An does have is voice quality associated with tone; this can be attributed to contact influence. The results are summarized in the chart below:

	Provide evidence for NT	Don't provide evidence either way	Provide evidence for CT
Tone series changes 14 of Li's examples available	12 followed NT	2 followed CT but other NT languages had the CT form also	0
Tone category changes 14 of Li's examples available	7 followed NT	6 examples followed NT but other CT languages found that also had the NT form 1 example had showed CT and NT forms	1, but only at one location
Voice quality as part of the tone			It clearly has this trait

Chart 10. Summary of Tone evidence

3. Segmental differences

3.1 Evidence from the development of proto initial consonants

Segmental features that distinguish NT from CT languages are observed in the development of the proto consonants. Only those proto segments that show how NT and CT have developed in different ways are discussed below.

In particular, NT does not have aspirated stops. However, Nùng An does have some aspirated stops. Yet the modern day forms of Nùng An proto aspirated stops are not quite what is expected of a CT language. The development of *ph, *th and *kh and any related consonant clusters seems to be different for each stop, which probably indicates a mixing of influences and changes over time. The development of *ph in Nùng An (shown below) for the most part seems to have developed as a CT language would with the exception of the word 'person' which is not aspirated.

		CT	CT	CT	NT	NT	NT	Nùng An	Nùng An
Proto Initial	Gloss	Nùng Cháo	Nùng Inh	Li Lung-chow	Li Poai	Li Wu-ming	Gedney Yay	Quảng Hoà	Hà Quảng

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*ph	'feather'A1	kʰŭn33	xŭn25	khun33	pïn24	x	pun33	pʰɤ̆n2131	pʰɤ̆n341
	'spit'	x	pʰi:23	x	pii22	x	pi22	pʰi:31?	pʰi:42?
	'person'	x	x	x	puu33	x	pu̠	po:453?	po:45?

Chart 11. Development of *ph

Li says that in NT languages 'feather' would be **pïn A1** is a NT form and ***khun A1*** in CT. Nïng An has ***pʰɤ̆n2131***. This makes for an interesting combination. Nùng An has the NT labial consonant but the CT aspiration. The cognate 'spit' presents a similar situation. *'pi'* is a NT lexical form which Nùng An has, but the /p/ is aspirated as it would be in a CT language. The third example, 'person', shows a [**p**], an unaspirated NT form.

In clusters containing /ph/, Nïng An's development of *phl/r becoming [ph] or [phj] is close to what we expect from a CT language. Nùng An Quảng Hoà and Nùng An Hà Quảng seem to differ in that Nùng An Quảng Hoà seems to have had a loss of the palatalization, but this is a feature that can be easily found in CT, as can be seen in the Chart 12 below.

Proto Initial	Gloss	CT Nùng Cháo	CT Gedney Lungming	CT Li Lungchow	CT Gedney West. Nùng	NT Li Poai	NT Li Wu-ming	Nùng An Quảng Hoà	Nùng An Hà Quảng
*pl	'fish'	pʲa:33	pyaa:55	pjaa33	paa41	pjaa24	pla33	pa:2131	pʲa:341
	'ring'	pʲɔ:k35	phʲook45	pjook55	pɔk21	čook(?)	x	pɔ:k31?	po:k42?
	'bark, shell'	pɯ:k35	pɯɯk45	pïik55	pɔk21	x	pluk24	pɯ:k31?	x
*phl/r	'to walk'	pʰʲăi24	x	phjaai24	x	pjaai44	pjaai55	pʰăi34	x
	'vegetable'	pʲăk35	phjak55	phjak55	phak55	pjak55	pjak24	pʰăk45	pʰʲăk45
	'forehead'	pʰʲa:k35	phjaak45	phjaak55	phaak21	pjaak22	pjaak24	pʰa:k31?	pʰʲa:k42?
	'hair'	pʰʲŭm33	phyom55	phjum33	pham14	pjɔm24	pjɔm33	pʰɤ̆m2131	pʰʲɤ̆m341

Chart 12. The development of *pl and *phl/r

The development of *pr, though, follows the unique characteristic of NT and SW in which *pr>t. See Figure 1 below. Nùng An shows a similar shift but the /t/ is aspirated. See the examples below. There are data from two other CT languages that share this trait: Long'an (Zhang and Wei 1997: 88) and Gedney's Western Nùng. Hence, the fact that Nùng An has this trait does not necessarily mean that it is a NT language.

Proto	Gloss	CT Nùng Cháo	CT Li Lung-	CT Gedney West.	CT Z & W	NT Li Poai	NT Li Wu-	NT Gedney Yay	Nùng An Quảng Hoà	Nùng An Hà Quảng

		chow	Nùng	Long 'an		ming		
*pr	'to dry'	pʰʲaːk35	phjaak55	thaak21	tak⁸	taak22	rak24	taak22	tʰaːk31?	tʰaːk42?
	'to hunt'	Nùng PS pʰʲãu 23	phjau55	x	x	tău22	x	tau22	tʰău31?	tʰău42?

Chart 13. The development of *pr

The development of *th in Nïng An is classic NT in which aspiration has been lost. In the case of *tr, *thr, *tl, *thl, they all seem to have become /tʰ/. Since *th has undergone deaspiration, it appears likely that *thr and *thl also would undergo the same process becoming indistinguishble from *tr and tl. Then these clusters, from whatever the original source, further developed into an aspirated /th-/, thus:

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*th                      >t
*thr>        }        }
*tr, *pr >       tr
*thl >       }            > th
*tl >            tl
```

Figure 3. The development of *th, *tr, *thr, *tl, *thl

The aspiration seems to be a secondary change, not directly descended from the proto language. Hence, although Nùng An has aspiration it has developed differently from the aspiration in CT languages. See Chart 14 for example of these shifts.

Proto Initial	Gloss	CT Nùng Cháo	CT Nùng Inh	CT Li Lung-chow	NT Li Poai	NT Li Wu-ming	NT Gedney Yay	Nùng An Quảng Hoà	Nùng An Hà Quảng
*th	'sugar'	tʰɯːŋ33	tʰɯːŋ25	thïiŋ31	fïi ŋ55	x	tɯaŋ454	tɯːŋ32	tɯːŋ31
	'bean'	tʰuː35	tʰuɤ23	thuu55	tuu31	x	tua41	tuː42	tuː54?
	'arrive'	tʰŭŋ33	tʰŭŋ25	thïiŋ33	taŋ55	x	taŋ33	tăŋ32	tăŋ31
*tr	'eye'	haː33	tʰaː25	haa33	taa24	ra33	ta33	tʰaː2131	tʰaː341
	'die'	tʰaːi33	tʰaːi25	haai33	taai24	rai33	taay33	tʰaːi2131	tʰaːi341
*thr	'stone'	hĭn33	tʰʳïn25	hin33	hin24	rin33	rin33	tʰʳïn2131	tʰʳïn341
	'tail'	haːŋ33	tʰaːŋ25	haaŋ33	lïi ŋ24	rïaŋ33	rɯaŋ33	tʰɯːŋ2131	tʰɯːŋ341
	'carry w/ pole'	tʰaːp45	x	haap55	laap22	rap24	raap22	tʰaːp31?	tʰaːp42?
	'head louse'	hău33	hau55	hău33	lau24	rău33	raw33	tʰău213	tʰău341

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								1	
	'loom'	hŭk35	huk55	hŭk55	look22	rök24	rok22	tʰŭk45	tʰuːk42ʔ
	'sweat'	huː35	huɤ23	hɨi55	x	x	x	tuː31ʔ	tuː42ʔ
	'weep'	hăi24	hai213	hăi24	tai44	x	tay13	tăi34	tăi35
*tl	'full'	tĭm33	tĭm55	tĭm33	lim24	rim33	rim33	tʰ̉ĭm213 1	tʰ̉ĭm341
*thl	'to plow'	tʰăi33	tʰai25	tʰăi33	šai24	x	say33	tʰăi2131	x
	'all'	tʰuːn24	tʰuɣn213	thuun24	x	x	taŋ454	tăŋ32	tăŋ31

Chart 14. The development of * th, *tr, *thr, *tl, *thl

Both 'sweat' *tɯː B1* and 'weep' *tăi C1* do not have aspiration. With more data perhaps it can be seen that further change is occurring causing th>t as it did historically with *th which would give more definite evidence that Nùng An is a NT language.

In the cognate 'all' *taŋ C1*, an unaspirated form was found in several other CT languages (Gedney's Ping Siang, Ning Ming and Lungming dialects) and thus does not appear to be an indicator of Nùng An's origins as Li indicated.

In the case of *kh, Nùng An has a mixed outcome. 'Kill,' 'sell' and 'son-in-law' follow NT, but 'eggplant' and 'leg' follow CT showing aspiration. However, it should be noted that Gedney's Ningming and SZ Lok data also show the NT form *haːi A1* 'sell,' indicating that this form may be an areal feature rather than a marker for NT. This is a case where limited examples are a problem since there does not seem to be enough evidence to say definitively what the present day form of *kh is. /kʰ-/ seems to occur as often as /k-/. Since Nùng An has had CT neighbors for over the last hundred years, the aspiration perhaps can be attributed to contact with CT neighbors particularly because of its inconsistent nature.

		CT	CT	CT	NT	NT	NT	Nùng An	Nùng An
Proto Initial	Gloss	Nùng Cháo	Nùng Inh	Li Lung-chow	Li Poai	Li Wu-ming	Gedney Yay	Quảng Hoà	Hà Quảng
*kh	'eggplant'	xɯː33	x	x	kĭi55	x	x	kʰɯː2131	kʰɯː341
	'leg'	kʰa33	kʰaː25	khaa33	kaa24	ha33	ka33	kʰa2131	kʰa341
	'kill'	kʰa24	xaː213	khaa24	kaa44	ka55	ka13	kaː34	kaː35
	'sell'	kʰaːi33	kʰaːi25	khaai33	kaai24	hai33	kaay33	haːi2131	haːi341
	'son-in-law"	kʰɯi33	kʰɯɣi25	khĭii33	kĭii55	kĭi31	kɯay454	kɯi32	kɯː31

Chart 15. The development of *kh

Consonant clusters containing /k/ have developed in a different way from their counterparts with /t/ and /p/. All k-clusters have undergone some kind of simplification, but the precise nature of those reductions is quite variable, as reflected in Chart 16 below. In all the reflexes, Nùng An seems to favor NT rather than CT forms.

Proto	Gloss	CT Nùng Cháo	CT Nùng Inh	CT Li Lungchow	NT Li Poai	NT Li Wuming	NT Gedney Yay	NT Milliken Wuming	Nùng An Quảng Hoà	Nùng An Hà Quảng
*khr	'egg'	săi35	hăi23	khjai55	čai22	rai24	cay22	rĕi35	r\ɬăi31ʔ	r\ʐăi42ʔ
*kr	'near'	săɯ24	săɯ213	khjäi24	čäi44	klaï55	căɯ13	x	x	căɯ35
*khl	'hard'	kʰɛːŋ33	xɛːŋ25	kheeŋ33	čeeŋ24	kleŋ33	cen22	x	kɛːŋ31ʔ	kɛːn42ʔ
	'spider'	saːu33	saːu35	khjaau33	čaau24	klau33	caaw33	kʲaw24	caːu2131	caːu341
*kl	'salt'	kɯː33	kɯː55	kïi33	čuu24	klu33	kua33	kiu24	cuː2131	cuː341
	'far'	kʷăi33	kʷăi55	kwai33	čai24	lăi33	cai33	kiei24	căi2131	căi341
	'head'	baːu24	tʰuː25	kjau24	čau44	rău55	caw13	rʌw55	rău34	ʂău35
	'banana	kui24	kui213	kuui24	čooi44	klöi55	coy13	kjɔj55	koː34	juː42ʔ
*khw	'right side'	ɬaː33	ɬaː354	ɬaa33	kwaa24	kwa33	kwa454	kwa31	kaː32	kʷaː31

Chart 16. The development of *kr, *khr, *kl, *khl.

Further examples in which Ņng An initials have developed more like NT than CT languages may be cited, as in Chart 17.

Proto Initial	Gloss	CT Nùng Cháo	CT Nùng Inh	CT Li Lungchow	NT Li Poai	NT Li Wuming	NT Gedney Yay	Nùng An Quảng Hoà	Nùng An Hà Quảng
*ʔbl\r	'month'	ɓɯːn33	ɓɯ̌n55	bïi n33	nïi n31	ʔɗi an33	dɯan33	ɗɯːn2131	ɗɯːn341
*fr	'tie, bind'	pʰŭk35	pʰŭk55	phuk55	šuk55	šuk24	suk33	sŭk32	x
*vr	'knife'	pʲa32ʔ	caː42ʔ	pjaaʔ21	šaa33	ša51	sa45	saː453ʔ	saː45ʔ
	'tomorrow	pʲŭk31	cŭk33	pjuk31	šook44	x	sok41	sɔːk42	soːk54
*vl	ashes	pjău21	său31	jau11	tau31	x	x	tău42	tău54ʔ
*dl	'to steal	lăk31	lăk33	lak31	lak44	šak13	rak33	săk32	săk31
	'nail'	ĺip31	lĕp33	lip55	lit55	rip24	rit33	ĺip45	ḱip45
	'lick'	liː31	liː31	lii31	lii55	ri31	ria454	liː32	li:31
*dr	'root'	laːk21	laːk31	laak31	laak31	rak13	raak41	răk42	r\ʐaːk54ʔ
	'boat'	lɯː31	lɯɤ31	luu31	luu55	ru31	rua454	lɯː32	lɯː31
*č	'breathe'	căɯ33	căɯ354	čäi33	sïi24	šăi33	sɯ33	său2131	său341
	'seven'	čit35	cɤ̌t55	čit55	šɛt55	šăt24	sat13	sɤ̌t45	săt45
*ɟ	'elephant'	caːŋ32ʔ	caːŋ42ʔ	čaaŋʔ21	šaaŋ33	šiaaŋ51	saaŋ45	saːŋ453ʔ	saːŋ53ʔ
	'morning'	x	x	čauʔ21	šau33	său51	saw45	x	său45ʔ
*r	'dry field'	ɬăi21	lăi31	ɬai11	lii31	roi13	ri41	rei42	ʐei54ʔ

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	Gloss								
	'strong'	ɬɛːŋ31	x	ɬeeŋ31	leeŋ55	reŋ31	reŋ454	riːŋ32	ʂeːŋ31
	'long'	ɬiː31	liː31	ɬii31	lai55	răi31	ray454	ɬăi32	r\zăi31
	'house'	ɬɯːn31	lɯɤn31	ɬii n31	laan55	ran31	raan454	raːn32	raːn31
*x	'enter'	kʰău24	xău213	khau24	hau44	hău55	haw13	hău34	hău35
	'knee'	kʰău35	xău23	khau55	hoo22	hö24	ho22	hɔː31ʔ	hou42ʔ
	'ginger'	kʰiːŋ33	xĭŋ25	khiŋ33	hiŋ24	kiăŋ33	hiŋ33	hĭŋ2131	hĭŋ341
	'dry'	khăɯ35	xăɯ25	khaï55	hïi44	haï55	hɯ22	ɬău34	hău35
	'rice'	kʰău24	kʰău213	khau24	hau33	xău51	hau45	hău453ʔ	hău45ʔ
	'teeth'	kʰeu24	xeu213	kheeu24	heeu44	x	hew13	heu34	x\heu35
	'bitter'	khŭm33	xɤ̆m354	khum33	ham55	xăm31	ham33	hăm32	xăm31
	'bite'	kʰŭp35	kʰɤ̆p55	khoop55	hap44	xăp13	hap33	hăp32	hăp31
*xr	'six'	hŭk35	hɔ̆k55	huk55	lɔk55	rok24	rok13	rɔ̆k45	ʂɔ̆k45
	'ear'	huː33	huː25	huu33	ɬii55	ri31	rɯa454	ʂ\rɯː32	rɯː31
	'road' NT	x	x	x	hɔn24	hon33	ran33	ʂăn2131	răn341
	'mortar' NT	x	x	x	lum24	rum33	rum33	rŭm2131	rɤ̆m341
*xw	'trousers'	kʰwaː35	kʰwaː25	khwaa55	vaa22	wa24	va22	vaː31ʔ	waː42ʔ
*ɣw	'smoke'	văn31	văn31	van31	hɔn55	xɔn31	lɯan454	ʔɔ̆n31ʔ\ŋɔ̆n32	x
*ŋw	'day'	văn31	văn31	van31	ŋɔn55	ŋɔn31	van454	ŋɔ̆n32	ŋɔ̆n31

Chart 17. Development of proto initial consonants following NT forms.

In *dl there is an exception where Nùng An seems to have /l-/ for 'lick.' Also for *ʔbl\r 'month,' Western Nùng (CT) also has *ɗɯːn A1*. In the following proto initials Western Nùng also follows the NT form. See the chart below.

	Gloss	CT Nùng Cháo	CT Nùng Inh	CT Li Lungchow	CT Western Nùng	NT Li Poai	NT Li Wuming	NT Gedney Yay	Nùng An Quảng Hoà	Nùng An Hà Quảng
*z	'buy'	ɬɯː32ʔ	ɬɯː42ʔ	ɬii?21	sɯ55	sïi33	šaï51	sɯ45	sɯː453ʔ	sɯː45ʔ
*ɲ	'to sew'	zăp31	ɲăp33	jap31	ɲip44	jip44	ɲĭp13	ɲip33	ɲĭp32	x
	'to dye'	zɔːm32ʔ	zɔːm42ʔ	joom?21	ɲom55	jum33	niăm51	ɲum45	ɲŭm453ʔ	ɲŭm45ʔ
	'mosquito'	zŭŋ31	x	juŋ31	ɲuŋ44	juŋ55	ɲuŋ31	ɲuŋ454	ɲŭŋ32	ɲŭŋ31
*gl	'to crawl'	caːn31	laːn31	kjaan31	caan44	luun55	x	caan454	luːn32	luːn31

Chart 18. Western Nïng and Nïng An both share some NT characteristics.

Li (1977) indicates that *ʔb, *ʔd and *ʔdl/r in NT languages have become /m-/, /n-/ and /ŋ-/ respectively. Gedney's Yay is an example, however, of a NT language that has the same forms

as CT. In the few cases where Li lists a form for Wuming, it too follows the CT form so *ʔb, *ʔd, and *ʔdl/r do not indicate decisively whether Nïng An is NT or CT.

		CT	CT	CT	NT	NT	NT	Nùng An	Nùng An
Proto Initial	Gloss	Nùng Cháo	Nùng Inh	Li Lung-chow	Li Poai	Li Wu-ming	Gedney Yay	Quảng Hoà	Hà Quảng
*ʔb	'shoulder'	ɓa:35	ɓa:23	baa55	ma22	ʔba24	ba22	ɓa:31ʔ	ɓa:42ʔ
	'leaf'	ɓăɯ33	ɓăɯ55	baï33	maï31	x	ɓaɰ33	ɓăɯ2131	ɓɤ̆ɯ341
	'thin'	ɓa:ŋ33	ɓa:ŋ55	baaŋ33	mεεŋ31	ʔbaŋ33	baaŋ33	ɓa:ŋ2131	ba:ŋ341
	'fish hook'	ɓĭt55	ɓĕt55	bit55	x	x	θet22	ɬε:p32\ ɓuĭt45	ɓăt45
*ʔd	'to scold"	x	ɗa:213	ʔdaa24	naa44	x	da22	ɗa:31ʔ	ɗa:42ʔ
	'good'	ɗăi33	ɗăi55	ɗai33	nii31	x	di33	ɗĕi2131	ɗĕi341
	'nose'	ɗăŋ33	ɗăŋ55	daŋ33	naŋ31	x	daŋ33	ɗăŋ2131	ɗăŋ341
	'extinguish'	ɗăp35	ɗăp55	dap55	nap44	x	dap13	ɗăp45	ɗăp45
	'hot'	ɗɯ:t35	x	ɗïi t55	naat22	x	daat22	ɗɯ:t31ʔ	ɗɯ:t42ʔ ʔ
*ʔdl/r	'black'	ɗăm33	dam55	x	x	ʔdam33	dam33	ɗăm2131	ɗăm341
	'star	ɗa:u33	ɗa:u55	daau33	naau31	ʔdau33	daaw33	ɗa:u2131	ɗa:u341
	'red'	ɗe:ŋ33	ɗε:ŋ55	deeŋ33	niŋ31	ʔdiŋ33	diŋ33	ɗiŋ2131	ɗiŋ341
	'mountain'	x	x	x	nooi55	ʔdöi31	x	x	ɗoi31
	'bone'	ɗu:k35	ɗŭk55	duk55	nook22	ʔdök24	dok22	ɗɔ:k31ʔ	ɗo:k42ʔ
	'sunshine'	ɗε:t35	ɗε:t23	deet55	x	ʔdit13	dit13	ɗit45	ɗit45

Chart 19. Development of *ʔb, *ʔd and *ʔdl/r

In the cases of *nl/r, *hŋ, *hr, *hň, and *ʔj, Nïng An clearly behaves like CT. See examples in Chart 20 below.

		CT	CT	CT	NT	NT	NT	Nùng An	Nùng An
Proto	Gloss	Nùng Cháo	Nùng Inh	Li Lung-chow	Li Poai	Li Wu-ming	Gedney Yay	Quảng Hoà	Hà Quảng
*nl/r	'water'	năm32ʔ	năm42ʔ	nam ʔ21	lam33	răm51	ram45	năm53ʔ	năm45ʔ
	'bird'	nŭk31	nŏk33	nuk31	lɔk44	rok13	rok33	nŏk32	nŏk31
*hŋ	'gums'	x	hɯ:k33 (Nùng PS)	hɯ:k55	ŋïik	x	ŋɯk13	hɯ:k31ʔ	hɯ:k42ʔ
*hr	'to bark'	hău35	hău23	hau55	lau\vau22	rău24	raw22	hău31ʔ	hău42ʔ

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*hň	'grass'	za:24	ɲa:213	jaa24	jii\jaa44	nïi	ɲia33\13	ɲɯ:34	ɲɯ:35
*ʔj	'medicine'	za:24	ɲa:213	jaa24	jii44	ʔʄi55	yia33	zɯ:2131	jɯ:341
	'hungry'	za:k35	za:k23	jaak55	jiik22	ʔʄiak55	yiak22	zɯ:k31ʔ	jɯ:k54
	'to stand'	žïn33	žïn55	jïi n33	x	ʔdǔn33	dɯn33	žïn2131	ɗǒn34

Chart 20. Development of *nlʔr, *hŋ, *hr, *hň, and *ʔj, *ɣ, and *ɣw

The development in ***ʔj** may give insight to the kinds of borrowing that have occurred between Nïng An and other Nïng dialects. A trait of the Nïng dialects is that the development of ***ʔj** where ***ʔj**>/j/>/z/ (Nicolson 1998:8). Other CT languages have /j/. In Nïng An, this trait has begun to be borrowed into only the Quảng Hoà dialect. This is not surprising since Quảng Hoà is less isolated and closer to Nïng and Tμy areas than Hà Quảng which is in the more isolated border area (see the map above in Figure. 1).

*ɣ, shown below, presents a "mixed bag" in its development. 'Jaw' and 'shin,' for example, agree with to be CT forms while 'evening,' 'sharp,' and 'person' seem to follow the NT pattern. 'Person' shows an alternate form from another speaker from Quảng Hoà. But in all these cases, where NT and CT differ in vowel development, Nùng An usually has the NT form.

		CT	CT	CT	NT	NT	NT	Nùng An	Nùng An
Proto Initial	Gloss	Nùng Cháo	Nùng Inh	Li Lungchow	Li Poai	Li Wuming	Gedney Yay	Quảng Hoà	Hà Quảng
*ɣ	'lower jaw'	ka:ŋ31	ka:ŋ31	kaaŋ31	haaŋ55	xaŋ31	haaŋ454	ka:ŋ32	ka:ŋ31
	'shin'	kɛ:ŋ21	kɛ:ŋ31	keeŋ11	heeŋ31	xeŋ13	heŋ41	kɛ:ŋ42	kɛ:ŋ54ʔ
	'evening'	ca:m21	hǎm31	kam11	ham31	xǎm13	ham41	xa:m42	xǎm54ʔ
	'sharp'	kǔm31	x	kum31	hɔm55	x	x	hǒm32	xǎm31
	'person'	kuǔn31	kǒn31	kïn31	hï n55	xun31	hun454	hǒn32\ huǔn32	hǒn31

Chart 21. Development of *ɣ

Summarizing the evidence of the development of Nùng An proto initials, it does seem that both CT and NT consonant initials occur, but there is more agreement with NT than CT. Even when there is segment evidence of Nùng An being a CT languages, the examples also show the vowel development or lexical items of a NT character. In addition, while Western Nùng is an example of a CT language that does seem to have borrowed some NT forms, the Nùng An far exceeds such numbers, weakening the view that the presence of NT form in Nùng An is only by borrowing.

Thus, Nùng An shares some formal features that would be diagnostic of a NT language, and others that would group it with CT languages, while displaying still other features that constitute mixed or ambiguous evidence. Chart 22 summarizes these features.

Sharing NT form	*ʔbl\r,*fr,*vr, *th,*dl, *dr, *r, *č, *ʄ, *z,*ň,*kr,*khr, *kl, * khl, *khw, *gl, *x
Sharing CT forms	*ph, *phl/r, *thr, *tr, *nl/r, *hr, *ʔj, *hň, *kh, *hŋ (but with NT

	vowel forms)
Showing traits from both NT and CT	*pr, *ɣ
Could be either NT or CT	*ʔb,*ʔd, *ʔdl/r

Chart 22. Summary of Consonant development evidence

3.2 Evidence from proto vowel development

The development of the present day vowels from their proto roots shows again evidence for considering Nùng An a NT language. In cases where NT and CT vowels have developed differently, Nùng An has gone the NT route. See the chart below.

		CT	CT	CT	NT	NT	NT	Nùng An	Nùng An
		Nùng Cháo	Nùng Inh	Li Lungchow	Li Poai	Li Wu-ming	Gedney Yay	Quảng Hoà	Hà Quảng
*i	'wing'	pik35	pĭk55	pik55	fit44	fiat13	fɯat41	fɯːt42	fɯːt54ʔ
*ɪ	'to arrive'	tʰŭŋ33	tʰŭŋ25	thïŋ55	fiŋ55	x	taŋ454	tăŋ32	tăŋ31
*uo	'bone'	ɗŭk35	ɗŭk55	duk55	nook22	ʔdök55	dok13	ɗɔːk31ʔ	ɗoːk42
	'tomorrow'	pʲŭk31	cŭk33	pjuk31	šook31	x	sok41	sɔːk42	soːk54ʔ
	'snake'	ŋuː31	ŋuː31	ŋuu31	ŋïi55	ŋïi31	ŋɯa454	ŋɯː32	ŋɯː31
	'ear'	huː33	huː25	huu33	ɾïi24	ɾi33	rɯa454	ʂɯː32	rɯː31
	'child'	luːk21	lŭk31	luk31	lïk44	lïk13	lɯk33	lŭk32	lŭk54ʔ
*e	'seven'	cĭt35	cɤt55	čit55	šɛt55	šet24	sat13	sɤt45	săt45
	'iron'	ɾik35	lĕk55	lik55	lɛk55	lïk24	x	lĕk45	lĕk45
	'bitter'	kʰŭm33	xɤm354	khum33	haɪm24	xăm33	ham33	hăm32	xăm31
	'bite'	kʰŭp35	kʰɤp55	khoop55	haɪp44	xïp13	hap33	hăp32	hăp31
*ə	'smoke'	văn31	văn31	van31	hɔn55	xɔn31	lɯan454	ʔɔ̃n31ʔ	lău54ʔ
	'day'	văn31	văn	van31	ŋɔn55	ŋɔn31	van454	ŋɔ̃n32	ŋɔ̃n31
*ɛ	'red'	ɗeːŋ33	ɗɛːŋ55	deeŋ33	niŋ31	ʔdiŋ33	diŋ33	ɗiŋ2131	ɗiŋ341
	'sunshine'	ɗɛːt35	ɗɛːt23	deet55	x	ʔdit	dit13	ɗit45	ɗit45
*a	'cloud'	pʰɯː24	pʰaː25	phaa24	fïi44	x	vɯa13	pʰɯː34	pʰɯː35
	'tail'	haːŋ33	tʰaːŋ25	haaŋ33	ɾïiŋ24	ɾïaŋ33	rɯaŋ33	tʰɯːŋ2131	tʰɯːŋ341
	'hungry'	zaːk35	zaːk23	jaak55	jïik22	ʔjiak24	yiak22	zɯːk31ʔ	jɯːk54ʔ
	'crawl'	caːn31	laːn31	kjaan31	luun55	x	caan454	luːn32	luːn31
*ɔ	'fog'	moːk35	mɔːk23	mook55	mook22	x	mok22	mɔːk31ʔ	moːk42

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	'stomach'	x	tɔ:ŋ42ʔ	tooŋʔ21	tuŋ33	x	tuŋ45	tu:ŋ453ʔ	tu:ŋ45ʔ
	'to dye'	zo:m32ʔ	zɔ:m42ʔ	joomʔ21	jum33	niăm51	ɲum45	ɲŭm453ʔ	ɲŭm45ʔ
*ïe	'house'	ɬɯ:n31	lɯɤn31	ɬïi n31	laan55	ran31	raan454	ra:n32	ra:n31
	'hot'	ɗɯ:t35	x	ɗïi t55	naat22	x	daat22	ɗɯ:t31ʔ	ɗɯ:t42ʔʔ
	'boat'	lɯ:31	lɯɤ31	ɬïi31	luu55	ru31	rua454	lɯ:32	lɯ:31
	'salt'	kɯ:33	kɯɤ55	kïi33	čuu24	klu33	kua33	cu:2131	cu:341
	'flesh'	nu:32ʔ	nu:42ʔ	nïiʔ21	noo33	x	no41	nɔ:42	no:54ʔ
*ue	'deaf'	nuuk35	nuɤk23	nuuk55	nuk55	x	nuk13	nŭk45	nŭk45
*əi	'long'	ɬi:31	li:31	ɬii31	lai55	răi	ray454	ɬăi32	r\zăi31
*ïai	'left-side'	ɬăi32ʔ	za:i42ʔ	ɬaaiʔ21	ɸïïi33	θïi51	θɯay45	ɬu:i453ʔ	ɬui45ʔ
*oï	'new'	măɯ35	măɯ23	maï55	moo22	x	mo22	mɔ:31ʔ	mo42ʔ
*ou	'to blow'	pău35	pău23	pau55	poo22	x	pɔ22	pɔ:31ʔ	po:42ʔ
	'knee'	kʰău35	xău23	khau55	hoo22	hö24	ho22	hɔ:31ʔ	hou42ʔ
*i̯əu	'nine'	kău24	kău213	kau24	kuu44	kău55	ku13	kŏu34	kŏu35
*uai	'banana'	kui24	kui213	kuui24	čooi44	klöi55	coy13	ko:34	ju:42ʔ

Chart 23. Vowels that have developed like NT

In the case of *ɛi, it may it appear that Nïng An having *ɛi>ei may actually be a variation of the CT development of *ɛi>ai, while NT has *ɛi>i. But Nùng An has a secondary change of i>ei. The cognate *pei* 'year' is one example. In all languages, whether SW, CT or NT, the form is usually *pi*. In the case of Nùng An, *pi* has become *pei*. It follows then that Nùng An historically had the expected NT development of *ɛi>i but with a secondary change of i>ei. See the chart below.

Proto		CT Nùng Cháo	CT Nùng Inh	CT Li Lungchow	NT Li Poai	NT Li Wuming	NT Gedney Yay	Nùng An Quảng Hoà	Nùng An Hà Quảng
*ɛi	'dry field'	ɬăi21	lăi31	ɬai11	lii31	roi13	ri41	rei42	ʐei54ʔ
	'fire'	făi31	făi31	fai31	fïi55	x	fi454	făi\ei32	fei31
	'good'	ɗăi33	ɗăi55	ɗai33	nii31	x	di33	ɗei2131	ɗěi341
*i	'year'	pi:33	pi:55	pi33	pi24	x	x	pei2131	pei341

Chart 24. Development of *ɛi and *i

There are cases where the Nùng An vowels seem to have developed in a way that is more closely identified with CT. In the case of *mou* 'pig' and *tou* 'door' these forms may be thought of as variations of Li's Wuming that have a diphthong in **mău** 'pig' or **tău** 'door.' Even though there are clearly CT languages such as Li's Tien Pao and Gedney's Lungming that have the same form

as Nùng An, it is not unreasonable to consider the presence of the diphthong as evidence that Nùng An is a NT language. See Chart 25 below.

	gloss	CT	CT	CT	CT	CT	NT	NT	NT	NT	Nùng An	Nùng An
	gloss	Nùng Cháo	Nùng Inh	Li Lung chow	Li T'ien Pao	Gedney Lung-ming	Li Poai	Li Wu-ming	Milliken Qiubei	Milliken Wuming	Quảng Hoà	Hà Quảng
*u	'pig'	mu:33	mu:354	muu33	mou353	mow55	muu24	mău33	mow44	mow24	mou2131	mou341
	'door'	tu:33	tu:55	tuu33	tou353	tow55	tou24	tău33	x	x	tou2131	tou341

Chart 25. Development of *u

Even though Li says that *o>ɔ in NT and *o>u in CT, Gedney has data that shows that /ɔ/ can be found in CT languages as well as in NT. Nùng Inh (CT) also shows *o>ɔ in 'six' and 'bird.' Hence, Nùng An showing *o>ɔ does not represent evidence for NT or CT languages. See Chart 26 below.

	gloss	CT	CT	CT	CT	CT	NT	NT	Nùng An	Nùng An
	gloss	Nùng Cháo	Nùng Inh	Li Lung chow	Gedney Lei Ping	Gedney Western Nùng	Li Poai	Gedney Yay	Quảng Hoà	Hà Quảng
*o	'sour'	ɬŭm24	ɬɤm213	ɬum24	lom13	sam22	ɬɔm44	θam22	ɬɤm34	ɬɤm35
	'hair'	pʰjŭm33	sŭm354	phjum33	phyom454	pham14	pjɔm24	piam33	pʲɤm2131 \pʰɤm2131	pʰjɤm341
	'fall'	tŭk35	x	tuk55	tok44	tɔk55	tɔk55	tok22	tɤk45	tɤk45
	'forest'	ɗŭŋ33	ɗŭŋ55	duŋ33	doŋ44	dɔŋ14	nɔŋ24	ɗoŋ454	ɗɤŋ2131	x
	'six'	hŭk35	hɤk55	huk55	hok44	hɔk55	lɔk55	rok13	rɤk45	ʂɤk45
	'bird'	nu:k31	nɤk33	nuk31	nok21	nɔk44	lɔk44	rok33	nɤk32	nɤk31

Chart 26. Development of *o

For both * ɨ   *eï\ɛï shown in Chart 20 below, examples in the data are mixed in the evidence that they give to the question of whether Nùng An is a NT or CT language. Below, some of Gedney's data from other CT dialects has been included to show the diversity of the attested present day forms. For example, in the case of * ɨ, the forms for 'person' and 'dusty' seem to follow CT, but 'round' follows the unusual development of an NT language. Examples for *eï\ɛï show an even more diverse development. In 'swollen,' for example *eï\ɛï has become ăɯ\ɤɯ as expected in CT. But 'give' in Nùng An shows *eï\ɛï>ăɯ, as in the NT forms. In the case of 'dry' and 'breathe,' instead of Nùng An showing *eï\ɛï>ăɯ, it has /ău/, which is not the form normally expected for CT or NT. However, 'dry' is found, though with the long vowel, among two of Gedney's CT dialects Lungming and Ping Siang (not shown).

proto	gloss	CT	CT	CT	CT	CT	CT	NT	NT	Nùng An	Nùng An
		Nùng	Nùng Inh	Li	Gedney Lung-	Gedney	Gedney	Li	Li Wu-	Quảng	Hà

*u̯i		Cháo		Lung chow	ming	Ning Ming	Western Nùng	Poai	ming	Hoà	Quảng
*u̯i	'person'	kŭn31	kɤn31	k̇in31	kɤn21	ken21	kɔn44	hïn55	hun31	hɔn32 hŭn32	hɤn31
	'round'	mŭn31	mïn31	mïn31	mɤn21	men21	man44	mɔn31	x	măn32	măn31
	'dusty'	mŭn31	mɤn31	mï n31	x	x	mɯn21	mɔn22	x	mŭn31	mŭn42ʔ ʔ
*ëi\ɛi	'swollen'	kăɯ21	kăɯ31	kaïl1	kauɰ11	kauɰ11	kauɰ31	kïi31	x	kăɯ42	kɤɯ54ʔ
	'dry'	khăɯ35	xăɯ25	khaï55	haaw33	hauɰ55	khauɰ21	hïi44	haï	ɬău34	hău35
	'breathe /heart'	căɯ33	căɯ354	čaï33	cɤuɰ11	x	cauɰ14	sïi24	šăi33	său2131	său341
	'give'	hɯ:24	hɯ:213	hïi24	hɤuɰ33	hauɰ25	hauɰ22	haï44	haï55	hăɯ34	hăɯ35

Chart 27. Development of *u̯i and *ëi\ɛi

In summary, though Nùng An shows characteristics in its vowel development of both NT and CT, the evidence leans more heavily toward NT. See the Chart 28 summarizing the evidence below.

Has developed like NT	*i, *ï,*uo, *e, *ə,*ɛ,*a,*ɔ, * ïe, *ue, *əi, *iai, *oï, *ou, *i̯əu, *uai
Has developed like CT	*u
"Mixed" cases or is not a reliable example	*o, * u' *ëi\ɛi

Chart 28. Summary of Vowel development evidence

4.2. Lexical Evidence

Another way that the line between NT and CT is drawn is by the presence or absence of particular lexical items. Since the Nùng An word lists were limited, only a small number of examples are available. Even so, the available evidence points to a NT connection of Nùng An.

Nïng An could be considered a CT language that has borrowed from historical NT neighbors. There are indeed other clearly CT languages that appear to have borrowed some NT lexical items. Gedney's Western Nùng is a good example of such a language. Hudak in presenting Gedney's data says that there are "lexical resemblances between Western Nùng and the Northern Tai branch" (Gedney 1995: 402). Although the Nùng An word lists did not include the words Hudak uses as example, they did include other examples. Below in Chart 29 are some of the NT forms in which both Western Nùng and Nùng An both show NT forms.

	CT	CT	CT	CT	NT	NT	NT	Nùng An	Nùng An
gloss	Cháo	Inh	Li Lung-chow	Gedney Western Nùng	Li Poai	Li Wuming	Gedney Yay	Quảng Hoà	Hà Quảng

'bear' A1	mi:33	mi:354	mii33	mɯɰy14	muui24	x	mɯɰay33	mui2131	mui341
'work' D1S	hĭt35	hĕt55	hit55	hɔk55ʔ	x	x	x	kŭk45	ku:k54
'mush-room' NT=D1S CT= D1L	ɓʲɔ:k35 D1L	zɔ:k23 D1L	vit31 D1S	hat55ʔ D1S	lat55, lɛt55	răt55	rat13	răt45	ʐăt45
'yellow' CT=A1 NT=C1	lɯ:ŋ33	lɯ̌ŋ354	lĩiŋ33	hen22	heen44	hen55	hen13	hɛːn34	hɛːn35
'hand' A2	mɯ:31	mɯ:31	mĩi31	muŋ44	fiŋ55	x	fɯɰŋ454	mʐ̌ɯ32	mŭɯŋ31

Chart 29. Western Nùng also and Nùng An both have NT lexical items

'Hand' is a more ambiguous example. The Quảng Hoà dialect Nùng An has the CT form. Western Nùng and Nùng An Hà Quảng have the CT initial, but they also have the final nasal attributed to NT.

Zhang Yuansheng and Wei Xingyun (1997:79) also hint at another indicator of NT versus CT in the word 'sun' ('eye' + 'day'). This is shown below in Chart 30. In NT forms 'sun' is the cognate *taŋ A1* plus the NT word form for 'day' *ŋon A2*. Nùng An has the NT form but with aspiration, a CT characteristic. Other Nùng dialects and the other Gedney CT dialects all have the CT form *tha A1* 'eye' and the CT form for 'day' *văn A2*. Western Nùng shows a blend with the first member of the phrase having the NT form but the second member 'day' having the CT form. But Nùng An seems to be more completely NT form, so this appears less likely to be simply borrowed from a NT language.

	CT	CT	CT	NT	Nùng An	Nùng An
gloss	Cháo	Inh	Gedney Western Nùng	Z & W[1] Wuming	Quảng Hoà	Hà Quảng
'sun' A1-A2	ha:33 văn31	tʰa:25 văn31	thaaŋ14 van44	taŋ[1 (A1)] ŋon[2(A2)]	tʰɯ:ŋ34 ŋɔ̌n32	tʰaːŋ341 ŋɔ̌n31

Chart 30. 'Sun'

While Western Nùng does have some NT lexical items, it does not have them to the degree that Nùng An does. In other CT languages, both in data from other Nùng dialects and the six Gedney CT dialects (1991, 1995), the NT forms listed below do not occur. That is not to say that there may not be CT languages that may have an occasional exception. However, as Chart 31 below shows, Nùng An distinguishes itself by having such a large number of NT 'exceptions,' much more extensively than other CT varieties that were compared. As mentioned above, Quảng Hoà Nùng An seems to have borrowed CT forms compared to the more conservative Hà Quảng dialect. See 'cave,' 'ghost' and 'tiger' below in Chart 24 below. This does not weaken the case for Nùng An as a NT language. The presence of a CT form can be easily explained as a recent borrowing from their dominant CT neighbors. It is the presence of the NT form that sets it apart.

	CT	CT	CT	CT	NT	NT	NT	Nùng An	Nùng An

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[1] The author did not include descriptions of the accompanying tones, he just made reference to the tone box.

gloss	Cháo	Inh	Li Lungchow	Milliken Long An	Li Poai	Li Wuming	Gedney Yay	Quảng Hoà	Hà Quảng
'sky' CT=C9 NT=A1	fa:32ʔ	fa42ʔ	faaʔ21	fa:54	mïn31	x	bun33	ɓɤ̆n2131	ɓɤ̆n341
'cave' CT=A2 NT=C1	ŋɯɤ̆m31	ŋɯ:n31	x	x	kaam44	kam55	kaam13	ka:m34 ŋɯ:m32	ka:m35
'day' A2	văn31	văn31	van31	x	ŋɔn55	ŋɔn31	van454	ŋɤ̆n32	ŋɤ̆n31
'morning' CT=A1 NT=D1S	năɯ33	năɯ35	nai33	saw44	hat55	hăt24	hat13	hăt45	hăt45
'feather' A1	kʰŭn33	xuɤ̆n25	khun33	khw n24	x	pïn33	pun33	pʰɤ̆n2131	pʰɤ̆n341
'flower' CT=D1L NT=A1	ɓʲɔ:k35	zɔ:k23	bjook55	va:14	x	x	va33 dok22	va:2131	wa:341
wing CT=D1S NT=D2L	pĭk35	pĭk55	pik55	pik55	fit31	fiat13	fɯat41	fɯ:t42	fŭt54
'ghost' CT=A1 NT=A2	pʰi:33	pʰi:25	x	x	faaŋ55	x	faaŋ454	ma:ŋ32 pʰei2131	ma:ŋ31
'great' A1	lu:ŋ33	x	luuŋ33	luəŋ24	huŋ24	huŋ33	huŋ33	hŏŋ2131 hŭŋ2131	hŏŋ341
'spicy' CT=D1S NT=B2	pʰĭt35	pʰɤ̆t55	phit55	x	x	man13	maan41	ma:n42	ma:n54ʔ
'painful' CT=D1S NT=A1	čĭp35	čɤ̆p55	čip55		ʔin31	ʔin33	ʔin33	ʔin2131	ʔin341
'cow' CT= B2 NT=A2	mɔ:21	mɔ:31	x	mɔ44	sïi55	ši31	sia454	sɯ:32	sɯ:31
'tiger' CT= A1 NT=D1S	ɬɯ:33	x	ɬïi33	ɬɯ24	x	x	kuk13	kŭk45 ɬɯ:2131	x
'mortar' CT=D1S NT=A1	cŭk21	lŏk55	kjuk55	hɔk55	lum24	rum33	rum33	rŭm2131	rɤ̆m341

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yesterday CT=A2 NT=A1	va:31	va:31	x	x	x	x	luɯan454	luːn32	luːn31
'garment' C1	łɯ:24	łɯɤ213	ɬii24	x	x	x	pïa41 B2	pu:42 B2	pu:35 B2?/C1
'girl' D1S	me:21	me:31	mɛɛl11	x	bïk44	x	bïk13	bǔk45	bɤ̌k45

Chart 31 Lexical items of NT that are present in Nïng An

In the word 'ghost,' Nùng An does not have /f/ as Wuming does in **faaŋ** *B2* (the proto initial consonant is *mw), but Li says that some NT varieties have the initial /m/. This is also the development rule for Nùng An *mw>m.

The Nùng An word lists include the word 'road' that Li says is a form found in Southwestern (SWT) and NT, but not in CT. In this case, Nùng An has the cognate for the NT form, but it does not have the /h/ initially as Li's NT languages show as Li's NT languages, rather it shares the same development of Yay (NT) *xr>r/ʂ.

	CT	CT	CT	CT	CT	NT	NT	NT	NT	Nùng An	Nùng An
gloss	Cháo	Inh	Li Lung-chow	Gedney West. Nùng	Milliken Long An	Li Poai	Li Wu-ming	Milliken Qiubei	Gedney Yay	Quảng Hoà	Hà Quảng
'road'	lɔ:21 B2	lɔ:31 B2	x	loo31 B2	lɔ42 B2	hɔn55 A2	hon31 A2	ða:n44 A2	ran454 A2	ʂăn2131 A2	răn2131 A2

Chart 32 'road'

In the case of 'head', shown below, Li says the CT form **tʰuː** *A1* does not occur in NT languages, although the NT form **baːu24** is found in CT languages. Nùng An clearly agrees with the NT language forms.

	CT	CT	CT	NT	NT	NT	Nùng An	Nùng An
gloss	Cháo	Inh	Li Lung-chow	Li Poai	Li Wu-ming	Gedney Yay	Quảng Hoà	Hà Quảng
'head' CT =A1 NT=C1	hu:33 ba:u24	tʰu:25 x	huu33 kjau24	x čau44	x rău55	x caw13	x rău34 łău34	x ʂău35

Chart 33. 'head'

Using CT Nùng dialects alone as a standard, consistently the cognate 'seed' *mui B1* was given. But in Nïng An, the NT form **năt** *D2S* is found as shown Chart 34 below.

	CT	CT	CT	NT	NT	NT	Nùng An	Nùng An
gloss	Cháo	Inh	West Phàn Slình	Li Poai	Li Wu-ming	Gedney Yay	Quảng Hoà	Hà Quảng

'seed, grain' CT =B1 NT=D2S	mui35	muɤi23	moi23	nɛt22	nat24	nat33	nĕt42	năt31

Chart 34. 'seed'

Another cognate consistently found in Nïng dialects is 'garlic' *łu:n B1*. Li lists 'garlic' only being present in Poai as *łooi B2*. Data from other NT languages show forms cognate with Poai's form *łooi B1*. If *łooi B1* is the NT form and *łu:n B1* the CT form, then Nùng An seems to mainly have the NT form, although both were given in Quảng Hoà (Chart 35). Gedney also reported the NT for Western Nùng (CT).

	CT	CT	CT	CT	NT	NT	NT	Nùng An	Nùng An
gloss	Cháo	Inh	West Phàn Slình	Gedney West. Nung	Li Poai	Li Wu-ming	Gedney Yay	Quảng Hoà	Hà Quảng
'garlic'	łu:n35	łuˇn23	ło:n55	sɔy21	łooi22	x	θoy22	łu:i31ʔ NT łu:n31ʔ CT	łu:i42ʔ

Chart 35. 'garlic' has NT form

There are cases where the lexical situation seems mixed. In Chart 36 below, the NT form for 'mat' occurs in Hà Quảng, but in Quảng Hoà the CT form is given. Both in the case of 'mat' and 'garlic,' since these are items that are bought in markets and people tend to use Vietnamese or a dominant CT language, it makes sense that these terms would be susceptible to borrowing from the neighboring CT.

'Hand' also shows that in Quảng Hoà the CT form is used. In Hà Quảng a NT form with its characteristic final /-ŋ/ is found, but it does not have the initial consonant consistent with NT. Instead it has the CT phonological development for the initial consonant: *mw>m. Although CT forms are present in at least one of the Nùng An dialects, its does not necessarily indicate that Nùng An is a CT language. In a CT dominant area, CT contact forms are expected. It is the presence of NT forms in Nùng An that appears unexplained apart from genetic reasons.

	CT	CT	CT	NT	NT	NT	Nùng An	Nùng An
gloss	Cháo	Inh	Li Lung-chow	Li Poai	Li Wu-ming	Gedney Yay	Quảng Hoà	Hà Quảng
'mat' D2L	fu:k21	fŭk31	fuk31	min22	x	bin13	fŭk42	ɓïn35
'hand' A2	mɯ:31	mɯ:31	mïi31	fiŋ55	Qiubei fuŋ35	fuŋ454	mˇɯ32	mŭŋ31
'finger' C2	niu32ʔ	niau42ʔ	niiuʔ21	ŋiang B2 (Dioi)	x	ɲiaŋ41 B2	ɲi:ŋ42 B2 niu453ʔ C2	łïp45

Chart 36. 'mat,' 'hand,' and 'finger' have NT form only in one location

Edmondson (1994: 153) lists another lexical item, 'bamboo shoot,' from the *Zhuangyu Jianzhi* survey done in China in the 1950's that can be used to distinguish NT from CT languages. Nùng

An of Hà Quảng has the NT form **năŋ31 A2**, while Quảng Hoà appears to have the CT cognate **nou32 B1**. While in the NT the initial consonant is expected to be /ɣ/ (descended from *nl/r), in Nùng An it has become /n/ since in Nùng An *nl/r>n. See Chart 37 below.

	CT	CT	CT	NT	NT	Nùng An	Nùng An
gloss	Edmondson Southern Zhuang	Cháo	Inh	Li Poai	Edmondson Northern Zhuang	Quảng Hoà	Hà Quảng
'bamboo shoot'	ŋo⁵⁽ᴮ¹⁾ maːi⁴ (C2)	maːi24C2	maːi213 C2	laaŋ55 A2	ɣaːŋ²⁽ᴬ²⁾ A2	nou32 A2	năŋ31 A2

Chart 37. 'bamboo shoot' had NT only in one location

Li considered 'spit' **pi B1** and 'blind' **boot D1L** to be found only in NT languages, but as can be seen below, they can be found in a broad range of CT languages. Hence, they cannot be counted as clear evidence of either NT or CT ancestry.

	CT	CT	CT	CT	NT	NT	Nùng An	Nùng An
gloss	Cháo	Inh	Li Lung-chow	Gedney Western Nùng	Li Poai	Gedney Yay	Quảng Hoà	Hà Quảng
'spit' B1	pʰiː33	pʰiː23	x	phii21	pii22	pi22	pʰiː31ʔ	pʰiː42ʔ
'blind' D1L	ɓoːt35	x	boot55	bɔt21	x	bot22	ɓɔːt31ʔ	ɓoːt42ʔ

Chart 38. 'spit' and 'blind' are not reliable markers

Luo Yongxian, a native speaker of Zhuang, has identified additional cognates for Tai languages that are useful in considering evidence for whether a language is NT or CT (Luo 1997). Chart 39 has two of his proposed cognates that were included in the Nïng An word lists.

	CT	CT	CT	CT	CT	NT	NT	Nùng An	Nùng An
gloss	Cháo	Inh	Western Nùng Phàn Slình	Luo[1] Lung ming	Luo Tho	Luo Yay	Luo Feng shan	Quảng Hoà	Hà Quảng
'armpit' CT=C2 NT=B1	ɬeː32ʔ C2	leː42ʔ C2	leː42ʔ C2	lee C2	x	ʔi B1	ʔi B1	ʔe31ʔ B1	ʔɣi42ʔ B1
'eyebrow' A2	cău31	caːu31	său42	caw	s\chao	x	çau	său32	său31

Chart 39. 'arm pit' takes NT form but 'eyebrow' does not appear to be a reliable marker

Luo's addition of the cognate 'armpit' shows Nùng An to be clearly following the NT form, not only in the initials, but also in a change of tone. 'Eyebrow,' on the other hand, shows an /s-/ which can be considered a CT form according to his Tho data. Western Nùng Phàn Slình also shows /s-/.

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[1] This distortion of the autonym Mla' Bri' (mlaq briiq) is suggestive of hyper-correction by a Northern Thai person converting the sound sequence [ml-] into [mr-] (it must be conceded, however, that the autonym is often said with an indistinct first syllable so that there may either occur a flap or be no clear second segment at all.

Although Nùng An seems to have many NT characteristics, there are also examples where Nùng An shares CT forms, as illustrated in Chart 40 below.

	CT	CT	CT	CT	NT	NT	NT	Nùng An	Nùng An
gloss	Cháo	Inh	Li Lung-chow	Gedney Western Nùng	Li Poai	Li Wuming	Gedney Yay	Quảng Hoà	Hà Quảng
'fishhook' D1S	ɓĭt35	ɓĕt55	ɓĭt55	bɔt55	x	x	θet D1L	ɬɛːp31ʔ D1L ɓuĭt45	ɓăt45
'comb' A1	vi:33	vi:354	vii33	vii14	pai31 B2	pai13 B2	x	ro:i2131 vei2131	roi341 wei341
'drunk' A2	mău31	mău31	mau31	x	fii55	x	x	mău32	tŏu31
'dirt' A1	tŭm33	tŭm55	tum33	naam31 B2	naam31 B2	tom33	naam41 B2	tŏm2131 tăm2131	tăm341
'deer'	kʷaːŋ33 A1	x	kwaaŋ33 A1	x	x	x	vɯaŋ A2	kʷaːŋ2131 A1	x

Chart 40. Proposed CT vocabulary found in Nïng An

Li considers *mau A1* 'drunk' to be a form not found in NT. In Nùng An, two speakers from Hà Quảng gave *tŏu31 A2* 'drunk' which does not seem to appear in anyone else's data. But Quảng Hoà has the CT form *mau A1*. 'Deer' *kwaːŋ A1* presents an unclear picture. Nùng An in Quảng Hoà does have the CT term, but again it may be borrowed. Another term, *năn C2* 'deer,' was consistently given throughout all the Nùng dialects. It could be that the Vietnamese term used in interviews was not the correct one since there is more than one species of deer known in the area.

Zhang and Wei (1997: 92) give another cognate 'sweat' that draws the line between NT and CT varieties. Nùng An does not have the NT form, but it does have the unaspirated consonant that would be expected in a NT language. So there is a bit of a mixed message here: CT cognate, NT loss of aspiration. See the example below.

	CT	CT	CT	CT	CT	NT	NT	NT	Nùng An	Nùng An
	Cháo	Inh	Z & W Long-zhou	Z &W Daxin	Z & W Chong-zuo	Z & W Wu ming	Z. &W Tian dong	Gedney Yay	Quảng Hoà	Hà Quảng
'sweat' *thr	hɯ:35	hɯɤ23	hɯ⁵ (B1)	hə⁵ (B1)	ti⁶ (B2)	haːn⁶ (B2)	hɯːn⁶ (B2)	haan41	tɯ:31ʔ	tɯ:42ʔ

Chart 41. 'sweat' has CT form

Edmondson (1994) quotes a few more lexical items from the *Zhuangyu Jianzhi*. Nùng An has the CT forms except in the case of 'butterfly.'

	CT	CT	CT	CT	NT	NT	Nùng An	Nùng An
	Edmondson Southern	Cháo	Inh	Li LC	Edmondson Northern	Li Poai	Quảng Hoà	Hà Quảng

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	Zhang				Zhang			
'butterfly'	**kap** D1S **fu⁴** C2	x **bɯ24** C1	x **bɯɣ213** C1	x	**buŋ⁵** B1 **ba³**C1	x **maa44C1**	**ɓŭm32** A2 **ɓa:34** C1	**ɓŭm35** C1 **ɓa:35** C1
'horn' CT=D1L NT=A1	**ko:k⁷** (D1L)	**kɔ:k35**	**kɔ:k23**	x	**kau¹** (A1)	**kau24**	**kɔ:k31?**	**ko:k42**
'blanket' A2	**fa²** (A2)	**fa:31**	**fa:31**	x	**teŋ²** (A2)	x	**fa:32**	**ma:n31**

Chart 42. Examples of lexical items from Edmondson (1994)

In summary, when looking at the examples of lexical items that Li and others claim mark the line between NT and CT, the evidence is that Nïng An seems to be more closely related to NT. Some examples proved not to provide reliable evidence because of the number exceptions found. The results are summarized in the chart below:

based on Li and others	Examples don't provide evidence because exceptions were found	Examples available	NT Form	Mixed traits of NT and CT or CT only found at one location	CT Form
44	-2	=42	29 (69%)	5 (12%)	8 (19%)

Chart 43. Summary of Lexical evidence

Using percentages, 69% of the examples showed NT form. Another 12% were forms described as "mixed" in that the Quảng Hoà dialect had the CT form while the Hà Quảng had the NT form. This is not surprising since speakers of the Quảng Hoà dialect live closer to Tày and Nùng speakers. That leaves only 19% that are clearly CT. Considering that the language has been in a CT dominated area for over a hundred years, it is reasonable to assume the available lexical evidence appears to indicate thas Nùng An is an NT language. Even Western Nùng who have speakers of the NT Yay language as neighbors does not have that degree of NT forms.

3.0 Conclusion

The title of this paper asks whether Nùng An is an "aberrant son," a member of CT languages as its namesake "Nùng" suggest, but with some unusual quirks. Or, is it a "stepchild," that is, it shares Tai parentage with Nùng, but is an NT descendant that has adopted a CT language name and some CT linguistic characteristics when it migrated into a CT area, as Haudricourt claimed. Many examples taken from Li and others that are considered typical indicators of linguistic heritage show that Nùng An consistently, though not completely, follows NT forms in its tone system, segmental development and its lexical inventory. Can we say then that it is NT? There are some possible objections.

The biggest objection is probably found in the presence of aspirated stops in Nùng An since Tai specialists take it as diagnostic that NT languages do not have aspirated stops. Looking at their context reveals that although they are present, they have not developed in the same way that aspirated stops in CT have. For example, for *th, Nùng An has the NT form /t-/, not /th-/ as a CT language would have. But all consonant clusters containing *t have collapsed into /th-/. In the case of *phl/r, aspiration was present in Nùng An as a CT language, but the vocabulary was NT. Also, aspirated stops have not developed consistently. For example, *ph, *th, and *kh all have

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different ways that they have developed, but in CT languages they all have the present day forms of /ph-/, /th-/, and /kh-/ respectively. This inconsistency not only hints at a history of conflicting influences, but it also sets itself apart by not having the consistent development of the its Nùng CT neighbors.

The co-existence of the CT aspirated stops and NT vocabulary point to another possible objection. Languages, by nature, are susceptible to change. This change can come through a "wave-like" variation over time and spreading unevenly over wide geographical areas, or through the new influences brought by migration. From what is known about Nùng An's history, layers of both can be expected from both CT and NT which are probably almost impossible to unravel and account for fully. The development of aspirated stops described above is an example. Another example is how the Quảng Hoà dialect seems to have borrowed more CT forms than the Hà Quảng dialect which is more isolated from CT languages. Putting black and white boundaries on classifying languages may not be appropriate since the differences between languages accur along a continuum of greater and lesser degrees. For example, when the classifying boundaries of groups A and B, it should be expected that there are language varieties that share characteristics from both, but yet really do not fit either A or B. Nùng An may be an example of such a language. Although classifying may be satisfying, it does not accurately reflect the current state of Nùng An.

Another possible objection is that the data available is somewhat limited and it may be too early to say definitively where Nùng An fits. Admittedly, the Nùng An word lists were short and examples often too few in number to accurately distinguish a NT characteristic. China data from areas where the Nùng An reportedly originated was also limited. For example Edmondson (personal communication) has said that Southern Zhuang from Long'an (CT) does not have aspirated stops. Data provided by Margaret Milliken shows that it does. The difference can be accounted for by the fact that broad surveys or in-depth studies in the diverse Tai languages still have not been done. Also, there may be grammatical evidence that could help give a more definitive picture of where Nùng An belongs.

The question of whether Nùng An is CT or NT tests the prevailing ideas of what should be considered boundaries between NT and CT. If we consider the rule to be simply that NT languages do not have aspirated stops, then the argument is quickly answered that Nùng An should not be considered an NT language. However, if that is the definitive rule of thumb, it must also follow that the other traditional indicators of tone systems, segmental development and lexical items, can be dispensed with for classification and this paper would have been considerably shorter. To use one "black and white" rule in language classification violates the very fluid nature of language. If the broad range of the traditional indicators is applied to the Nùng An data available, it appears reasonable that Nùng An can be viewed as a member of the NT subgroup.

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PHÂN TÍCH 24 ĐỊA DANH VỀ PHƯƠNG DIỆN NGÔN NGỮ

Sarat Kumar Phukan

Về phương diện địa lý, bang Assam nằm trên một trong những con đường di dân quan trọng nhất của loài người từ thời xa xưa. Các nhóm ngữ hệ quan trọng là: ngữ hệ Nam Á được cư dân thuộc chủng Mongoloid (Khasi-Syntengs) sử dụng, ngữ hệ Miến-Tạng (Bodo, Karbi, Rava, Lalung, Tipra, Mizos...vv), ngữ hệ Aryans ...vv. Tất cả các nhóm này đã ghi lại những dấu ấn còn hiển hiện trong các lĩnh vực nghiên cứu như ngôn ngữ học, Địa lý, Lịch sử, Văn hóa và Nhân học...vv. Dù ngày nay một vài nhóm không còn hiện hữu nhưng sự tồn tại của chúng vẫn có thể được cảm nhận thông qua những địa danh tương ứng. Các địa danh được xem như là những mốc lịch sử với Sử học và như những hóa thạch đối với Khảo cổ học. Các nghiên cứu thuộc các ngành ngôn ngữ học, địa lý, sử học, nhân học, dân tộc học, khảo cổ học và các ngành liên quan khác sẽ không thể hoàn chỉnh nếu không có sự đóng góp của ngành địa danh học. Trong bài nghiên cứu này, chúng tôi cố gắng xác định một số yếu tố ngôn ngữ đáng chú ý cũng như một số yếu tố khác thông qua việc nghiên cứu tiếp cận liên ngành như nghiên cứu các hậu tố, tiền tố, các biệt tố (specifics), các biến đổi về ngữ nghĩa, các dạng uyển ngữ, chuyển ngữ, các mô hình cấu trúc, cấu tạo dựa trên từ ngoại lai, quá trình sai lạc nghĩa của từ (corruption of words), những dấu chỉ về các đặc trưng địa lý và lịch sử ...vv. Bài viết cũng đề cập đến việc làm thế nào mà các nhóm cư dân cổ xưa trong khu vực này thụ đắc được những tri thức khoa học và đạt tới trình độ cao trong việc đặt tên các địa danh và truyền lại một cách hệ thống các tri thức ấy cho thế hệ ngày nay. Điều này còn nổi bật hơn trong các ngành như ngôn ngữ học, địa lý và nhân học. Quy trình định danh và từ nguyên cũng như những chỉ dẫn về ngữ pháp của các địa danh ngày nay vẫn còn rất quan yếu. Phương pháp nghiên cứu được áp dụng trong bài viết này là: (1) Thu thập phần lớn cứ liệu thông qua các cuộc điều tra thực địa, tham khảo ý kiến của các chuyên gia ngôn ngữ liên quan tại địa phương và một số từ điển; (2) Các cứ liệu có sẵn đều được chú giải về mặt ngôn ngữ; (3) việc xác định từ nguyên của địa danh cũng bao gồm việc xác lập địa danh đó; (4) Kết luận.