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This paper updates the reconstruction of the stative aspect prefix in Proto-Zapotecan as *nand tracks innovations in stative marking. An early change is proposed to have deleted preconsonantal nasals, rendering segmentally unmarked stative forms of consonant-initial verbs in varieties of Zapotec then spoken in and around the city of Monte Albán. Contact with Chatino may be a factor in the retention of preconsonantal *n in Zapotec varieties spoken to the south. A fuller stative prefix, usually *na-, arose later from a grammaticalized form of the stative-marked copula (Munro 2007, Uchihara 2021). *na- is more productive than *n- and provides the basis for a new proposed "Eastern Zapotec" genetic grouping. However, the isogloss for *na- crosscuts the earlier isogloss for preconsonantal nasal deletion, showing that any model of Zapotecan linguistic history needs to address not only divergence but also convergence. Ethnohistorical and archaeological evidence provide a social context to the linguistic changes discussed.

Key words: Zapotec, Chatino, stative aspect, historical dialectology, genetic classification, areal convergence

1. Introduction¹

The languages of the Zapotecan family (Otomanguean) are spoken over a contiguous area that includes mountain ranges, valleys, and coastline in Oaxaca, Mexico, shown in Map 1. Genetic subgroups, based on shared innovations in a family tree model (Schleicher 1853), correspond to historical migrations that lessened contact between the migrants and people who remained in the Central Valleys region. However, successive waves of migration, especially to the Sierra Sur region, put previously divergent varieties into close contact as neighbors, leading to diffusion over reformulated social networks at different points in Zapotecan history. This paper looks at two innovations related to stative aspect morphology, one an early sound change that is inherited by a discrete group of daughter languages that fit neatly into a cladistic analysis, and the other a later case of grammaticalization that diffuses across previously diversified varieties.

¹ Cada apartado de este trabajo se explica en castellano en un video hecho por la autora. El video correspondiente a este apartado se encuentra en <u>https://youtu.be/w0fQ_LxEfKI</u>, donde en la descripción se encuentran ligas a los videos sobre los otros apartados.

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Map 1: Zapotecan languages in their respective regions of Oaxaca (Map data: Google)

Zapotecan languages have *n*-initial verb forms that indicate a continuous state where other forms indicate a change of state. For example, Amatec Zapotec (Riggs 2020) has /n-zob/ 'is sitting' compared to /zob/ 'may sit,' /m-zob/ 'sat,' and /b-zob/ 'sit!' Similarly, Rincón Zapotec² has /na-gásχ/ 'is black,' but /bi-gásχ/ 'became black,' /i-gásχ/ 'will become black,' and /r-gásχ/ 'is becoming black.' Such *n*-initial verb forms have been labelled "neutral" (Munro 2015: 59, Galant 2012), "continuative" (Speck 1978: 28), "progressive" (Speck 2012), and "resultative" (Kittilä 2015: 371), but are more often called "stative" (Campbell 2014, Antonio Ramos 2015, Mcintosh 2015, Sullivant 2015, Kaufman 2016, López Nicolás 2016, Foreman & Lillehaugen 2017, Alonso Ortiz 2020).

Table 1 shows cognates between four representative languages. All Zapotecan languages preserve the original stative prefix n^{-3} on vowel-initial positional verb stems like 'lie

² Rincón Zapotec (*Dídza Xìdza*) forms come from the author's collaboration with Nelson Martínez Pérez, Zaira Hipólito López and Eva López Chávez of Tanetze de Zaragoza.

³ Throughout the paper I use "*n" as a convenient shorthand for what I analyze as an underspecified *[nasal] contrast, in the sense of Archangeli (2011). At the Proto-Zapotecan time depth I expect this contrast to have been realized with the place features of the following segment when preconsonantal, with a default [coronal] place of articulation assigned when prevocalic, and as vowel nasalization when word-final.

down,' but the prefix has been lost before consonant-initial stems like 'stand' in Papabuco and Tlacolulita. This paper argues that Papabuco and Tlacolulita belong to a clade defined by this shared deletion. The stative participles 'slippery' and 'short' are marked with a newer and more productive /na-/ prefix in Miahuatec and Tlacolulita but occur with a historical perfective prefix /w-/ in Coatec and are unmarked in Papabuco. Although Tlacolulita and Papabuco share an early innovation, Miahuatec and Tlacolulita form part of a later social network through which the *na*- prefix diffused.

Gloss	Coatec ⁴	Miahuatec ⁵	Papabuco ⁶	Tlacolulita ⁷
'is lying down'	n-à∫ ⁸	n-â∫	n-a∫ ⁹	n-á∫
'is standing'	n-zô	n-dó	zu	zó
'(is) slippery'	w-tu?z	na-rùz	t∫uz	na-rùʒ
'(is) short'	w-∫ûβ	na-∫ŭb	∫ub	

 Table 1: Some morphological correspondences

The *na*- prefix reduces to *n*- in some cases, thus becoming identical to the *n*- prefix. Munro (2007) considers the different syntactic behavior of *n*- marked verbs, e.g. /n-ji² \hat{u} ?/ 'is/was closed,' and adjectives, e.g. /n-k^wéb^j/ 'new,' in Tlacolula Valley Zapotec and observes that in Zapotecan linguistics "two prefixes of the shape *n*-...have been analyzed as the same morpheme in various grammars." As anticipated by Munro's synchronic observation, this paper shows from a diachronic perspective that many Zapotec languages reflect two separate stative prefixes, one inherited from Proto-Zapotecan and another innovated at a later stage. Despite their semantic and phonological similarity, differences in distribution and productivity are revealed when one compares stative morphology across a wide range of Zapotecan languages. This paper references 43 varieties of 23 (out of an estimated 29) Zapotecan languages. The numbered languages and dialect continua in Map 1 are identified by name and genetic affiliation in the appendix, along with specific varieties mentioned.

⁴ Coatec Zapotec (*Di'zhke'*) data come from the author's collaboration with Lázaro Díaz Pacheco.

⁵ Miahuatec Zapotec (*Dí'zdéh, Dí'istèh*) data come from the author's collaboration with Emiliano Cruz Santiago of San Bartolomé Loxicha and Edmundo Palomec Hernández of San Agustín Mixtepec.

⁶ These data come from Operstein (Operstein 2015a & c) on Zaniza and Speck (2012) on Texmelucan.

⁷ Tlacolulita Zapotec (known to its speakers as *Xtì'chnò* 'our language') data come from the author's collaboration with Roque Julián de la Rosa and Reina Sosa Zenón.

⁸ All data throughout are cited in IPA, except where the values are uncertain, such as for Colonial Zapotec and the dormant Soltec language, which are only known from earlier documentary sources.

⁹ According to Speck (2012) this form means 'to be stuck on' but appears to be cognate with 'lie down.'

The synchronic forms and functions of stative predicates and participles are covered in §2. §3 updates the Proto-Zapotecan stative marker as *n- rather than the previous proposal of *na- (Kaufman 2016). This permits us to consider both unmarked stative forms (§4) like Papabuco /zu/ and *na*-marked forms (§5) like Miahuatec /na- \int ŭb/ as innovatory. These innovations will be used to propose two new genetic subgroups while also recognizing cases of diffusion and I will propose linguistic correlations with archaeological and ethnohistorical evidence to provide a more holistic perspective on Zapotecan social history (§6). Problematic data are discussed in §7 before concluding in §8.

2. Usage of stative-marked forms

Stative-marked words in Zapotecan languages typically function as predicates (§2.1), but stative participles (§2.2) can be marked with either stative or perfective morphology.

2.1 Stative predicates

Zapotecan languages have a class of positional verbs (Foreman 2012, Newberg 2012, Operstein 2012a, Rojas Torres 2012, Speck 2012, López Nicolás 2015, Foreman & Lillehaugen 2017, Alonso Ortiz 2020) with a frequently occurring stative form used in grammatical constructions. Zapotecan verb stems can be vowel-initial or consonant-initial. Vowel-initial positional verbs like 'lie down' in (1) take a segmental prefix, usually /n-/, in all Zapotecan languages. Consonant-initial positional verbs like 'stand' take an /n-/ prefix in varieties like Lachixío (2) but are segmentally unmarked in varieties like Zaniza (3).

(1) Coatec (Southern) Zapotec (Beam de Azcona et al. 2013: 130) wê n-zò $\partial \hat{u}\beta$ me-yǒf **n-àf**=na?=m $\partial \hat{u}\beta$ tfǒn jêts DIST¹⁰ STA-exist one 3HR-old **STA-lie.down**=APPL=3HR one three pot

¹⁰ Some examples contain phonological and grammatical reinterpretations. Glossing abbreviations are: 1INCL = first person inclusive, 1SG = first person singular, 2 = second person, 2FAM = second person familiar, 3 = third person, 3AN = third person animal, 3H = third person human, 3HF = third person human familiar, 3INAN = third person inanimate, 3FR = third person feminine respectful, 3HR = third person human respectful, 3REL = relative pronoun, 3SG.IF = third person singular informal, 3S.PROX = third person singular proximate, 3S.INAN = third person singular inanimate, ADV = adverb, AN = animate, APPL = applicative, CAUS = causative, CC = copula complement, CL = classificatory morpheme analyzed variously as a classifier or a class term, COMP = complementizer, COP = copula, DAT = dative, DEF = definite, DEM = demonstrative, DIST = distal, H = human, HAB = habitual, INTE = interrogative, INTER= interjection, GEN =genitive marker, IPFV = imperfective, LOC = locative, M = complement of a motion verb, NEG = negative, NMLZ = nominalizer, NOM = nominative, NP = noun phrase in a relative clause that is coreferent with the head, PFV = perfective, PL = plural, POT = potential, PREP = preposition, PRON = pronoun, PROX = proximal, R = realis, R1 = replacive that

'There was an old lady who had three pots'

- (2) Lachixío variety of Coyachilla¹¹ continuum (Molina Sánchez et al. 2002: 64) ru?u tsu n-zu tuku una?a r-u+ja? inza mouth well STA-stand one woman IPFV-take.out+hand water 'The woman is standing taking water out of the well'
- (3) Zaniza (Papabuco) Zapotec (Operstein 2012a: 167)
 meg zu=n lo=ã
 table STA.stand=3INAN face=1SG
 'The table is in front of me'

In some Zapotecan languages only a few words outside of positional verbs have a stative form. In such languages only 20-30 or so lexical items have stative forms. In other languages stative marking is productive and may occur on well over a hundred words.

In the Zoochina variety of Cajonos Zapotec, López Nicolás (2016: 195-197) describes a prefix / \check{n} -/ that renders a continuous reading on stative intransitive verbs (4a) and a resultative reading on transitive verbs with stative or eventive meanings (4b):

(4)	Zoochina variety of Cajonos Zapotec (López Nicolás 2016)					
	(a)	/nè	ň-bàň= dʒó/	[némbándʒó]		
		still	STAT-be.alive=1INCL.NOM			
		'We'ı	e still alive'			
	(b)	dà?à	ň-gò?ò=tò?	jèz=ňà?		
		mat	STA-place.inside =1INCL.NOM	1 corn=DEF		

'We have caused the corn to be placed inside the mat'

Rincón Zapotec uses a prefix /na-/ on stative predicates like 'empty' in (5a). The unmarked order in Zapotecan is for the subject to follow the predicate. Rincón Zapotec has unmarked

forms imperfective stem, REL = relativizer, S3FOR = third person formal subject, S_{REL} = relative clause, STA = stative, SUB = subordinator, SUBJ = subject, V = verb, X = morpheme of undetermined gloss. I use the Leipzig conventions for morpheme boundaries and have rendered Spanish translations in English here.

¹¹ I use the term "Coyachilla Zapotec" to refer to a set of closely related varieties including Lachixío, Los Altos and San Miguel and San Mateo Mixtepec, explained further below in §6.2.2.

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roots like 'black' in (5b) which occur in attributive function, following the nouns they modify, with no verbal prefixes. If such a root follows a noun but is marked with /na-/, like 'red' in (5c), speakers consistently translate this structure with a relative clause, indicating its function as a predicate.

- (5) Tanetze variety of Rincón Zapotec
 - (a) **na-dat** χ ju?u **STA-empty** house 'the house is empty'
 - (b) bèľa gásχ meat black
 'black meat'
 - (c) dù **na-gát** thread **STA-red** 'thread that is red'

A draft dictionary of Lachixío Zapotec lists several stative-marked words as "adjectives," but in nearly all the example sentences provided, the stative-marked words head predicates:

(6) Lachixío variety of the Coyachilla continuum (Molina Sánchez *et al.* 2002)¹²

ne-ro?ko [ta?ma nó r-aku bè endo? $z_a?na]_{NP}$ **STA-thick** memela¹³ REL HAB-eat PL child small 'The memela that the children eat is thick'

All Zapotecan languages have stative forms for positional verbs and at least a few other lexemes that can function as predicates. Verbs with vowel-initial stems take an *n*- prefix, whereas consonant-initial stems may be marked with *na*-, *n*-, or ϕ -.

¹² I have made some reinterpretations in this and other examples from Molina Sánchez et al. based on consultation with Mark Sicoli.

¹³ A small tortilla usually topped with some combination of salsa, lard, beans and/or cheese.

2.2 Stative participles

I define stative participles as deverbal adjectives referring to continuous states. In Zapotecan languages stative participles usually have either a stative or a perfective prefix. Since these participles bear verbal morphology, in some cases there is ambiguity as to whether a word is a verb or an adjective. Both verbs and adjectives can serve in either attributive or predicative function, but whereas verbs have multiple inflected forms, adjectives tend to be morphologically invariable.¹⁴

Munro identifies five syntactic differences between stative adjectives and stative (in her terminology "neutral") verb forms in Tlacolula Valley Zapotec. For example, adjectives "require a copula (in the Irrealis aspect) to express a simple future reference," as shown in (7a). Stative verb forms cannot combine with the copula in this way, as shown in (7b).

- (7) San Lucas Quiaviní, Central Valley dialect continuum (Munro 2007)
 - (a) **n-dágà**? g-á?k nazi^h **STA-hot** IRR-be today 'Today will be hot'
 - (b) ***baan**^j g-á²k=iŋ **STA.live** IRR-be=3S.PROX (Intended reading: 'He will be alive')

Cruz Santiago (in preparation) identifies three types of participles in Miahuatec Zapotec: those marked with *na-*, such as /na-dzì/ 'sweet'; those with *b-* or *w-*, as in /b-dʒǎd/ 'broken'; and those which are identical to the perfective form, e.g. /m-b-jâl/ 'fermented.' *b-* and *w-* are historical perfective prefixes. Participles like /b-dʒǎd/ are distinct from synchronic perfective forms like /mdʒád/ due to tonal differences and because of the addition of a nasal realis prefix that developed in Chatino and Southern Zapotec (Beam de Azcona under review). So, Miahuatec has stative-marked participles and two kinds of perfective-marked participles: those derived before and after the advent of realis marking.

Stative and perfective-marked forms may be reinterpreted as participles due to ambiguity in relativized noun phrases. (8a) shows a monomorphemic adjective following the noun it modifies. (8b) shows a post-nominal relative clause (following the personal pronoun $m\dot{a}$, which is a light head). It is clear that /ŋgùθ/ is the first word in this clause because it has the

¹⁴ Munro (2007) mentions some adjectives that occur unmarked in constructions that are perhaps compounds but which always have an n- prefix when occurring as an independent word.

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second position clitic $=\beta a?/$ attached to it. I have marked a gap following the verb, where the subject would occur if it were an independent clause. (8c) is ambiguous and there are no enclitics or other clues to disambiguate. $/\eta g \hat{o} t f/$ clearly modifies /má/ but it's not clear whether it does so as an adjective, as in (i), or as the verb in a relative clause, as in (ii). The narrator translated (8b) into Spanish with a relative clause but (8c) with a participle.

- (8) Coatec (Southern) Zapotec (Beam de Azcona *et al.* 2013)
 - (a) tǒp $[m-bæ?l zi?l]_{NP}$ POT.two CL-AN.snake big 'two big snakes'
 - (b) Nà n-zò [má [**n-gù\theta=\betaa?=tsa?** Ø]_{SREL}]_{NP} and STA-be.contained 3AN **R-PFV.die=like.this=just** NP_{REL} 'And there are animals that just up and died'

(c)	'There	e are only	injured animals'			
	(i)	Abe?n	n-zò	[má	ŋ-gŏt∫] _№	
		only	STA-be.contained	3an	R-PFV.break	
	(ii)	Ábe?n	n-zò	[má	[ŋ-gŏt∫	$Ø]_{SREL}]_{NP}$
		only	STA-be.contained	3an	R- PFV.break	NPREL

Semantically, the difference between 'broken animals' and 'animals that are broken' is negligible. Such ambiguity permits the reanalysis of perfective forms as stative participles. In (9) the same ambiguity occurs with a stative-marked form that was translated into Spanish with an adjective.

(9) Miahuatec Zapotec (Cruz Santiago & Beam de Azcona in preparation) [lâr **na-gát**]_{NP} pà?b mòſt gòk m-dìgé+bíx. cloth **STA-black** HAB\request teacher POT.clothe CL-youth+small 'The teacher requests black clothing for the students to wear.'

Although stative and perfective-marked forms may be ambiguous as to whether they are adjectives or verbs, verbs in relative clauses can bear a wider range of inflectional prefixes, including the imperfective in (10) and the potential in (11).

- (10) Miahuatec (Southern) Zapotec (Cruz Santiago in preparation) gĭz ndʒùdʒ, hwá?n nal jźe m-b-êz=a? cólera na=h illness spiral REL now PROX R.IPFV-R1-say=1INCL cholera DIST=INTER Spiral illness, which today we call cholera!
- (11) Coatec (Southern) Zapotec nâ nkwăn $\partial \hat{u}\beta$ [mbjô [**y-ăk** Ø $\int \hat{n}+\hat{j}\hat{u}z$ nâ]_{SREL}]_{NP} 1SG IPFV-seek.1SG one youth **POT-become** NP_{REL} offspring+in-law 1SG 'I am searching for a young man to be my son-in-law.'

Since the *na*- prefix indicates a continuous state and the perfective references a completed event which has often resulted in a continuous state, these verb forms lend themselves to reinterpretation as stative participles. I propose that stative participles in Proto-Zapotecan were mostly perfective-marked, because stative morphology was originally used only on a few select verbs. In certain languages and subgroups thought to have diverged relatively early on, including Papabuco (Operstein 2015a: 336), Coatecan (Beam de Azcona under review) and Sierra Juárez Zapotec (Nellis & Goodner de Nellis 1983), stative participles are most frequently expressed with perfective verb forms. In other languages both perfective and stative-marked forms frequently function as adjectives, but the *na*-marked participles are more common. Stative participles in *na*- number around 150 in Miahuatec (Cruz Santiago & Beam de Azcona in preparation), but there are also at least 105 adjectives which appear to be historically or synchronically derived from perfective forms. In some cases, the perfective- and stative-marked forms are synonyms, such as 'salty' /b-dĭʃ/ ~/na-díʃ/, but in other cases the two morphemes are exploited to distinguish between different meanings, as in /w-lì/ 'correct, certain, true' vs. /na-lì/ 'straight.'

3. The phonological form of the stative marker and its productivity Whether found on predicates or participles, nasal-initial stative prefixes exist in all branches of Zapotecan. However, in languages with a full syllabic prefix, usually *na*-, the stative is much more productive than in languages which only have the stative marker *n*-.

Table 2 shows the approximate number of stative-marked entries appearing in various dictionaries. The first three languages have a prefix consisting of a single consonant, which was found in combination with fewer than 25 roots in the sources cited. Cajonos is grouped separately because the form of the prefix and the number of entries in the Zoogocho dictionary does not tell the full story, which we will return to in §7. The other languages

here have a full syllable /nV-/ when the stative is marked on consonant-initial stems, and dictionaries for these languages list numerous stative-marked forms. Córdova's dictionary of Colonial Valley Zapotec lists 3544 entries beginning in <na>. If even 10% of these are stative forms, it would more than double the number found in modern dictionaries.

Language	Stative prefix	Entries
Zenzontepec Chatino (Campbell & Carleton in press)	n-, l-, t- ¹⁵	22
Coatec Zapotec (Beam de Azcona in preparation)	n-	9
Sierra Juárez Zapotec (Nellis & Goodner de Nellis 1983)	n-	16
Zoogocho (Cajonos) Zapotec (Long & Cruz 1999)	ň-	25
Lachixío (Coyachilla) Zapotec (Molina Sánchez et al. 2002)	n-, ne-	67
Rincón Zapotec (Earl & Earl 2011)	na-	158
Amatec (Riggs 2020)	n-, na-	84
Miahuatec (Cruz Santiago & Beam de Azcona in preparation)	n-, na-	150
Colonial Valley Zapotec (Córdova 1578)	na-	hundreds

Table 2: Stative-marked entries in Zapotecan dictionaries

Most Zapotecanist linguists have assumed that languages with the stative prefix /n-/ had simply deleted the vowel from Kaufman's (2016) *na-. However, the difference in productivity between n- and na- is evidence that these markers, although semantically and phonologically similar, have different histories.

The stative marker lacks a vowel and is less productive in languages thought to have diverged early (Smith Stark 2007, Operstein 2012b), like Chatino, Totomachapan and Coatecan. If these languages are conservative, Proto-Zapotecan may have marked the stative with *n- on only a small number of verbs, including positionals.

The reconstruction of a Proto-Zapotecan prefix *n- that could concatenate to consonantstems implies different phonotactic constraints than what has previously been envisioned, since up until now no *NC clusters have been reconstructed. Since not all modern Zapotec languages have such clusters, their reconstruction requires an explanation of their loss.

¹⁵ I reserve discussion of Chatino stative allomorphy for future work but I would point out that *t*- is rare and that /n/ and /l/ can be reflexes of the same earlier phoneme (Campbell 2018).

4. The loss of preconsonantal nasals

The literature on positional verbs in Zapotec recognizes the existence of unprefixed stative forms of consonant-initial positional verbs in some languages (Lillehaugen & Sonnenschein 2012: 24–25, López Nicolás 2016: 421, Foreman & Lillehaugen 2017, Alonso Ortiz 2020). This pattern can be observed in Papabuco languages (examples 3 & 12), as well as Nuclear Zapotec (§6), which includes Central Zapotec languages (13-14), and all the languages of the Sierra Norte (15-17).

- (12) Texmelucan (Papabuco) Zapotec (Speck 2012: 248)
 a ta? laʒ kut ru dõ?
 INTE STA.be.attached orange POT-sell 2 POT-drink.1SG
 'Are there any oranges (on the tree) that you could sell me to drink?'
- (13) Santa Ana del Valle, Central Valley continuum (Rojas Torres 2012: 177)
 sôb
 STA.sit
 'S/he is seated'
- (14) Colonial Valley Zapotec [1567] (Foreman & Lillehaugen 2017) ticha zabi-quià=tete quiebaa word STA.be.floating-up=very heaven
 'The words are (floating) up high in heaven'
- (15) Macuiltianguis, Sierra Juárez Zapotec (Foreman 2012: 195)
 zua=ni=tè bel:iu=à? lo mesa=à?
 STA.be.on=APPL=1SG.DAT money=DIST on table=DIST
 'I have the money on the table'

(16) Yalálag, Cajonos Zapotec (Newberg 2012: 226)
jo? to be?n:e riʒ ja
STA.be.contained one person home steel
'There is a person in jail'

(17) San Juan Yaée, Rincón Zapotec (Galant 2012: 142)
 maria de=nu lo pedru
 Maria STA.lie.down=3FR face Pedro
 'María is lying in front of Pedro

The very same verbs that are unmarked in these languages appear with the *n*- prefix in others. The verb in (18) is cognate with that of (14), the verb in (20) with that of (16), and the verb in (22) is cognate with that of (13) and probably (15).

(18) Zenzontepec Chatino (Campbell & Carleton in press)
n-tak^wi ko: tsu? k^wã:
STA-float cloud back sky
'There are clouds in the sky'

- (19) Totomachapan Zapotec¹⁶
 - na: **n-du**:=na?

1SG STA-stand=1SG

'As for me, I am standing'

¹⁶ Totomachapan data are the author's phonetic transcriptions of audio recordings from the Survey of Zapotec and Chatino Languages (Sicoli & Kaufman 2010) found using Sicoli & Ko's (2016) online tool.

- (20) San Baltazar Loxicha, Coatec Zapotec (Beam de Azcona *et al.* 2013: 130)
 tſŏn jêts n-zò nîts
 three pot STA-be.contained water
 '...three pots full of water...'
- (21) San Bartolomé Loxicha, Miahuatec (Beam de Azcona *et al.* 2013: 219) jâ+ndrànt∫ n-dó ró lîz ∫a?
 tree+orange STA-stand mouth house 3H
 '…the orange tree that was in front of their house…'
- (22) Coatecas Altas, Amatec (Southern) Zapotec (Juárez Santiago 2018: 94)
 n-zŏb mà?d ló jà
 STA-sit child face tree
 'The child is sitting in the tree'

The languages that have zero-marked stative forms of consonant-stems, like those shown in 12-17), always have *n*- marked on the stative form of positional verbs with vowel-initial stems, whether the initial vowel begins the root (23) or is the causative prefix *o- (24). Note that (24) is the causative version of the same verb seen above in (14).

(23) Texmelucan (Papabuco) Zapotec (Speck 2012: 246)
bit jag nu n-af re nẽ
PFV.sell tree COMP STA-stick there PREP.1SG
'Sell me the tree that is over there'

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(24) Colonial Valley Zapotec (Foreman & Lillehaugen 2017)

chela n-o-saui	lorenzo	garcia	xono	peso		
and STA-CAUS-be.floating	Lorenzo	García	eight	peso		
'and Lorenzo García owes eight pesos'						

Considering that the stative prefix is n- on vowel-stems in all of Zapotecan, and before consonant-stems in languages thought to have diverged early on, I assume that the Proto-Zapotecan prefix *n- was marked on consonant-stems but was lost in the common ancestor of the shaded languages in Map 2. I confirmed this pattern listening to the audio for stative forms of positional verbs in 70 communities included in the Survey of Zapotec and Chatino Languages (Sicoli & Kaufman 2010), using the online search tool (Sicoli & Ko 2016).



Map 2: Languages with zero-marked stative forms of positional verbs (Map data: Google)

It has previously been reported (López Nicolás 2016, Foreman & Lillehaugen 2017, Alonso Ortiz 2020) that a zero-marked stative form is a feature unique to positional verbs, defining them as a formal class of verbs unto themselves. I argue that unmarked stative forms result from a regular sound change that deleted preconsonantal nasals. The reason that zero-marked stative forms have mainly been observed with positional verbs is that these were the main verbs that could take the stative prefix *n- in Proto-Zapotecan. Positional verbs didn't become a special subclass with the deletion. They were already included in a special subclass of verbs in Proto-Zapotecan by virtue of their ability to receive the stative prefix. Most Zapotecan languages which have only *n*- show limited productivity of this prefix, as seen in Table 2, but if they have *n*- before consonants they mark this prefix on all positional verbs.

Nasal-marked stative forms of consonant-initial positional verbs in the unshaded languages in Map 2 provide the best evidence for earlier *NC clusters.¹⁷ That the isogloss for preconsonantal nasal deletion is discontinuous suggests that this change took place before the westward migration that led to the creation of the Papabuco languages. This innovation is the basis for a new genetic grouping proposed below in §6.1.

¹⁷ Additional evidence for preconsonantal nasal deletion is found in the form of medial NC fossils found mainly in languages that retain *n- on consonant-initial positional verbs. These words have final nasalized vowels in Chatino and appear to have moved the locus of the nasal contrast when prominence shifted from the ultima in Proto-Zapotecan to the penult in Proto-Zapotec. For example, 'mosquito' is $/k^{wi}$ -nat $\tilde{e}/$ in Zenzontepec Chatino (Campbell & Carleton in press), /mblăntſ/ in Miahuatec Zapotec (reported to me by the late Edmundo Palomec Hernández of San Agustín Mixtepec), and /mlent// in Amatec Zapotec (Riggs 2020), but lacks a medial nasal in languages that have unmarked stative forms of positional verbs, e.g. [mbila^ht[a] in Santo Domingo Petapa (author's collaboration with Lourdes & Salomón Rasgado Guerra), [mbiliaht(e)] in Tlacolulita, and //be'lattfa// in Sierra Juárez Zapotec of San Juan Atepec (Nellis & Goodner de Nellis 1983). Likewise, 'bone' is /tihjã/ in Zenzontepec Chatino (Campbell & Carleton ibid), chinte in Soltec (Elorza 1886), and [rinde] in San Pedro el Alto (Sicoli & Kaufman 2010), but is nasal-less in languages with unmarked positional verbs, e.g. /dʒít/ in Tanetze, and chita in Colonial Valley Zapotec (Córdova 1578). Thus far I know of a few handfuls of words with medial NC and in most cases the patterns are as in these two examples: medial NC fossils are found in languages that also preserve *n- on consonant-initial positional verbs and are absent in languages that deleted the stative prefix before consonants. However, these data are less regular than the positional verb data. Not every word that can be reconstructed with a nasalized vowel has a modern NC cluster. When a word has medial NC, that word will not retain the nasal in every language that retains the stative prefix before consonants. Though no medial NC fossils have been found in the Sierra Norte languages (which delete the stative prefix *n- before consonants), some Central Zapotec languages (which also delete the stative prefix) have a few words with medial NC fossils, though they are fewer than in languages which retain the stative prefix and could be due to borrowing.

5. The development of *na-

Kaufman (2007: 92; 2016) reconstructs the Proto-Zapotec(an) stative marker as *na=, but above I proposed that it was simply *n-. If the vowel is not original to the stative prefix, the next question is how the *na*- prefix found in so many languages came about. Auxiliary verbs are a common source of verbal morphology in Zapotec. Both the Central Zapotec (Smith-Stark 2004, Broadwell 2015) and Chatino (Beam de Azcona under review) progressive markers grammaticalized out of stative forms of positional verbs used in a syntactic progressive construction. Several Zapotec languages are said to have andative and venitive aspect prefixes derived from the verbs 'go' and 'come' (López L. & Newberg Y. 1990, Gutiérrez Lorenzo 2021, Uchihara 2021). Like the progressive, andative and venitive prefixes, the *na*- stative marker has also grammaticalized from an auxiliary verb, namely the stative form of the copula. Munro (2007) was the first to suggest that "the *n*- prefixes on Adjectives and Neutral verbs may have the same original source, perhaps even from a historical fusion with some earlier 'be' verb that was the ancestor of the modern copula *nàa*."

The /nga/ copula is itself a reduced form of the stative-marked Proto-Zapotecan copula *n-akka, as evidenced by variation between /nga/ and /na²k/ in San Lucas Quiaviní (Munro *et al.* 1999). Uchihara (2021), citing an earlier draft of Munro (2007), provides additional support for the idea that the stative prefix can be traced to the copula:

The explanation for maintaining the vowel of the stative prefix can be found in its verbal origin (Munro 2002: 9). In some varieties of Central Zapotec, there is a copula *na*: (San Lucas Quiaviní) or *nă*: (San Pablo Güilá). It may be the case that the stative prefix comes from this copula, and that it hasn't lost its prominence in some varieties due to its verbal origin. This proposal is supported by two types of evidence. First, the stative prefix in many varieties has certain tonal effects (it assigns a high or falling tone to the root): e.g. Teotitlán del Valle za: 'grease' > na- 'zá: 'greasy.' This fact can be explained if the stative prefix comes from the copula *nă:, just as it is preserved in Güilá; the original rising tone has become a low or mid tone associated with a floating high tone in Quiaviní or Teotitlán (Uchihara 2016), and we could assume that the tonal effect of the stative prefix comes from this original rising tone. The second piece of evidence for the verbal origin of the stative prefix is its position in Zoochina Zapotec (López Nicolás 2016). In this Northern variety, the plural prefix is added *after* other tense/aspect/mood prefixes, but *before* the stative prefix: $s\chi\hat{q}$ - $n-\hat{a}$: $s\chi=\hat{q}$ <PL-STA-bathe=S3FOR> 'they are bathed' vs. $b-s-q:s\gamma = \hat{e} < CMP-PL-bathe = S3FOR>$ 'they bathed.' The

more internal position of the stative compared to other tense/aspect/mood prefixes in the verbal template may be due to its verbal origin; that is, the stative occurs in the same position as verbal compounds or the andative and venitive which come from verb roots. (Uchihara 2021)

Munro (2007) recognizes that synchronically there are two separate *n*- prefixes, due to their different syntactic behavior. Uchihara (2021) gives phonological and morphological evidence in support of the idea that the stative n(a)- prefix may have grammaticalized from the copula but does not comment on stative marking on positional verbs and whether it is distinct or not. One goal of the present paper is to argue that there are two separate stative prefixes, not just synchronically but diachronically.

Sierra Juárez Zapotec does not appear to have a *na*- stative prefix but, like Central Zapotec, does have a reduced version of the copula. Foreman & Dooley (2015: 267) mention, "*baani* as an adjective means 'alive'. It occurs as a free attributive adjective, but when used predicatively, it is incorporated with 'be': *naabaani*." That this is incorporation and not prefixation is justified by the long vowel in [na:], incompatible with an unstressed prefix. If a similar process of compounding involving the copula were productive in a language ancestral to modern languages with the *na*- prefix, perhaps enough new lexical verbs were created that *na*- could be reinterpreted as a prefix.

The new prefix *na- has a phonologically fuller form and combines with an expanded set of lexical items when compared to the original stative prefix *n-, which I will now gloss as "stative 1." Stative 1 was restricted to a small set of verbs which included positional verbs, the copula, a few motion verbs that included positional semantics, and a few other stative verbs. Other continuous states would have been expressed using the stative-marked copula in combination with predicate nominals and adjectives. This syntactic combination was prone to compounding, eventually giving rise to the new stative prefix *na-, which from here on I will gloss as "stative 2." Zapotecanists have been treating /n-/ as a reduced allomorph of /na-/, but I propose that the two prefixes have different etymologies, although the stative 2 prefix contains the stative 1 prefix *n-.

The difference between stative 1 and 2 is clearest when we look at consonant-stems.¹⁸ Table 3 lists varieties, languages, and subgroups according to the form of both stative

¹⁸ All Zapotecan languages mark stative 1 with *n*- on vowel-stems, as shown in Table 1. There are also examples of stative 2 marked as *n*- on synchronic vowel-stems, which may be confusing. Cognates like 'cold' with Coatec /k^w-àl/ corresponding to Miahuatec /n-âl/ suggest that such words could contain reduced forms of stative 2 in languages like Miahuatec, because if they were cases of stative 1 we would expect them to be more widespread. Indeed, Totomachapan and Zenzontepec, like Coatec, retain stative 1 on positional verbs

markers preceding consonant-stems. Consonant-initial positional verbs either begin in n- or have an unmarked stative 1 form. The languages with stative 1 marked with n- before consonant-stems are all thought to have diversified early (Smith Stark 2007, Operstein 2012b). There are three types of modern languages with respect to stative 2. Some languages lack this prefix, while others employ it on scores of lexical items, marking it with a syllabic prefix nV- in some varieties and with a reduced prefix n- in others. Varieties with a productive but reduced stative 2 prefix n- are mutually intelligible with others that use na-(the varieties listed here are grouped in Table 9 in the appendix according to intelligibility). This supports Uchihara's (2021) argument that (productive) n- in Central varieties like San Pablo Güilá is a recently reduced version of the na- prefix (§5.4).

Stative $2 \rightarrow$		nV-	<i>n</i> -
Stative 1			
<i>n</i> -	Chatino	Amatec	
	Totomachapan	Miahuatecan	
	Coatecan	Coyachilla	
Ø-	Papabuco	Some Cajonos	Some Cajonos
	Sierra Juárez	Rincón	Quiaviní
		Isthmus	Güilá
		Petapa	Jalieza
		Ocotlán	Quiatoni
		Teotitlán	Guevea

Table 3: Stative morphology found on consonant-initial stems and bases

On consonant-stems, /nV-/ is always stative 2 and ϕ - is always stative 1, but /n-/ can be either stative 1 or 2 because *na*- can reduce to *n*-. For this reason, productivity and lexical distribution are better diagnostic criteria than the phonological form of the prefix. Map 3 shows the languages with stative 2 as shaded.

but lack an initial nasal in this word. Central Zapotec languages, which, like Miahuatec, make extensive use of the stative 2 prefix, vary in the word for 'cold' between forms like Petapa [na'gá?l:a] and San Pablo Güilá /nàld/. These can even co-occur in the same language, as in Tlacolulita [na'ga?l ~na?l]. A similar case of consonant deletion is the word 'valuable,' recorded by Córdova 1578 as *nachóno*, but which occurs today in San Pedro Mixtepec as /nòn/ (Norma Leticia Vásquez Martínez p.c.). Such correspondences merit further research.



Map 3: Productive Stative 2 prefix (Map data: Google)

Zapotecan languages without stative 2 (Chatino, Totomachapan, Coatecan, Papabuco and Sierra Juárez Zapotec, see the appendix to locate languages and subgroups) are languages that diversified relatively early. They constitute a remote, mountainous, non-contiguous relic area that does not participate in the innovation of stative 2. All of Central Zapotec (whose internal diversification is recent) has stative 2. Papabuco is a subgroup that is geographically separated from Central Zapotec by intervening languages including the adjacent language of Totomachapan, which lacks stative 2 and retains stative 1 before consonants. Papabuco shares preconsonantal nasal deletion with Central Zapotec but lacks the stative 2 prefix. A possible explanation is that preconsonantal nasal deletion took place before the Papabuco migration, which in turn happened before the development of stative 2. I infer, therefore, that stative 2 is a later innovation than preconsonantal nasal deletion.

The stative 2 innovation crosscuts the earlier deletion of stative 1 on consonant-initial verbs shown in Map 2. The following sections use examples from representative languages to show the possible modern systems that underwent one of these innovations, the other, both or neither. §5.3 proposes that during the Colonial period stative 2 was in the process of

extending onto positional verbs and §5.4 concludes discussion of the stative 2 prefix with a look at how it reduces through pre-tonic vowel loss.

5.1 Conservative systems without stative 2

I propose that Chatino, Totomachapan¹⁹ and Coatecan languages preserve the Proto-Zapotecan system in which the stative 1 prefix was found on both consonant-stems and vowel-stems but was restricted to a small class of verbs that included the copula, positional verbs, a few stative verbs (perhaps color terms and, by the time of Proto-Zapotec, the verb 'live, be alive'), and a few motion verbs with positional semantics. Stative 2 did not exist (but see §7.2 for counter-evidence), and stative participles were formed with the perfective.

A few motion verbs in Zenzontepec Chatino indicate the trajectory of the subject with respect to some ground and accept the stative 1 prefix, including 'go out' /n-t^jūk^wá/ and 'enter' /n-ts-u?u/ (Campbell & Carleton in press). Galant (2012: 141, 160–161) identifies two verbs that he labels "verbs of motion used as positional verbs." Benton (2015: 133) likewise includes the verbs 'go away' and a 'come' verb in a list of positional verbs in Coatecas Altas. Motion verbs that indicate directionality may have been treated like positional verbs in Proto-Zapotecan as well, with *n*- indicating a continuous motion towards or away from a ground.

Aside from color terms, nearly all stative participles in Coatec are derived from synchronic or historical perfective forms, mostly using the prefixes β -/ and /w-/ (Beam de Azcona 2004: 250, 262). This mirrors the description of the neighboring Miahuatec language in §2.2, except that Coatec lacks stative 2. Miahuatec participles with stative 2 correspond to Coatec stative participles with perfective morphology. For example, 'short' is /na-jub/ in Miahuatec but / β -jub/ in Coatec, and 'hot' is /na-zu/ in Miahuatec but / β -zu/ in Coatec.

I illustrate the type of system I propose existed in Proto-Zapotecan in (25) with data from Coatec. In this language positional verbs take the stative 1 prefix n-, regardless of whether the stem begins in a vowel or consonant, as shown in (a). Participles bear historical perfective morphology and may follow a nominal element in a noun phrase, as in (b), or may precede an NP when heading a predicate, as in (c).

¹⁹ The dormant Soltec language is closely related to Totomachapan areally and perhaps genetically. I am aware of two words in Soltec that look like stative 2 forms, 'white' *nacaite* and *lacache* 'yellow,' but there isn't enough data to determine whether Soltec had the stative 2 prefix productively or not.

(25)San Baltazar Loxicha, Coatec (Southern) Zapotec (a) n-zò má n-zô m-bèj **STA1-be.contained** 3an STA1-stand CL-AN.worm 'There are animals with maggots' (b) ta? w-ju?ſ 3inan **PFV-toast** 'something toasted' (c) w-ju?ſ bídrjo **PFV-toast** glass 'The glass is brittle'

Papabuco languages and Sierra Juárez Zapotec are similar in lacking stative 2 and using perfective forms as stative participles, but they differ in that they lost the stative 1 prefix on consonant-initial verbs, as discussed in §4. These languages only have *n- on a few vowel-initial verbs. I illustrate this type of language in (26) with Zaniza Zapotec. (a) shows an unmarked stative form of a positional verb. (b) shows that perfective forms can serve in attributive function in a noun phrase, while (c) shows that the same forms can head predicates.

(26) Zaniza (Papabuco) Zapotec (Operstein 2015b: 177, a: 336)

(a) $\mathbf{z}\mathbf{u} = t \int i \mathbf{A} = p$

STA1.stand=upside.down=3S.INAN

'It stands upside down'

(b) gidih **u-nu**

(c)

hat **PFV-break**'Worn-out Hat' (a nickname)**u-nu** bal

PFV-break meat

'The meat went bad'

5.2 The emergence of the stative 2 prefix

In the last section we saw that among languages that never acquired stative 2, some languages mark stative 1 *n- on both vowel- and consonant-stems but others have deleted this prefix before consonants. Among modern languages with a stative 2 prefix, an estimated 13 are of the type that deleted preconsonantal *n-, whereas 4 are of the type that retain stative 1 before consonants. I illustrate the majority pattern here in (27) with data from Teotitlán del Valle, a Central Zapotec variety. Example (a) shows an unmarked positional verb with a consonant-initial stem, while (b) shows *n*- marked on a stative verb with a vowel-initial stem. (c) shows an adjective in attributive function following a noun. In this case the adjective was derived by adding stative 2 to a noun meaning 'lard, fat, grease, oil.' (d) shows a verbal form with stative 2 that heads a predicate.

- (27) Teotitlán del Valle Zapotec (Gutiérrez Lorenzo 2021: 200, 71; 2014: 24)
 - (a) $d=b\acute{e}nn^{j}$ $n\acute{n}=b\grave{a}-t^{j}\hat{u}?n$ $nd\bar{a}$ $z\hat{u}$ $r\bar{a}$ PL=person SUB=COMPL-lose DIST.DEM.PRON **STA1.stand**LOC.ADV '(The) people who lost (the game) (are) those standing there.'
 - (b) làd^j nàd3
 cloth STA1-get.wet
 'wet clothes'
 - (c) 3ùb nā-zá
 soup STA2-fat
 'oily soup'

(d) nā-nnậ kēd=gw-ứ=dj=àn
STA2-witness\1SG NEG=PFV-go=NEG=3SG.IF
'I know (that) s/he didn't go'

These data also illustrate a tonal phenomenon mentioned above in the quote from Uchihara (2021). In Teotitlán a historical rising tone has now truncated to a mid tone with a floating high that produces a sandhi effect on the following syllable, changing it to high or high-falling, unless one of these is already the underlying tone. The copula had this historical rising tone and stative 2 has mid tone in Teotitlán. The word 'fat' normally has low tone /zà/ but when combined with the stative 2 prefix it surfaces as high due to the sandhi in (27c). The root in example (d) undergoes no tone change when stative 2 is added because it already has a high-falling tone.

A minority of languages with stative 2 (Coyachilla, Miahuatecan and Amatec) have preserved stative 1 before consonant-stems. As a result, they have a large class of stative forms with /nV-/ but retain /n-/ on a small set of verbs that includes positionals and the copula. I represent this type of system with data from the Coyachilla dialect continuum. Stative 1 /n-/ is here shown on a consonant-initial positional verb in (a). Coyachilla varieties have *ne*- (and occasionally *ni*- and *no*-, perhaps due to vowel harmony) as the stative 2 prefix (b-d). They also have the vowel /e/ instead of /a/ in the copula /n-eka/ (Sicoli 2020). The form marked with *ne*- heads a predicate in (b) but in (c) functions as a predicate adjective followed by the copula. (d) shows that the stative 2 prefix is so productive that it can even be combined with loanwords like the root *palote* borrowed from Spanish *pelota* 'ball.' Spanish loanwords never take Zapotec inflectional morphology such as the stative 1 prefix. Instead, Spanish borrowings are frequently combined with the Zapotec copula or the verb 'do' in light verb constructions (Beam de Azcona 2017). The combination of the *ne*- prefix and the loanword in (50) is further support for stative 2's origin as a stative-marked copula.

(28) Lachixío variety of the Coyachilla continuum (Molina Sánchez et al. 2002)

(a)	[n-zoko	[bene	eno	seno	$carro]_{NP}]_{S}$
	STA1-be.seated	person	REL	drive	car
	'The person whe	o drives	the car	is seate	d'

- (b) [**ne-fafa** $[lo?tfi o-?na?]_{NP}]_{S}$ **STA2-rough** tongue PFV-plow²⁰ 'The bull's tongue is scratchy'
- (c) ne-tfa n-eka [be: nijo tfeno r-we? beej niki]_{SUBJ}
 STA2-terrible STA1-COP PL man when IPFV-drink 3PL alcohol
 'The men are terrible when they drink mezcal'
- (d) [**ne-palote** [be: melopi, be: lafa, be: $lima]_{NP}]_S$ **STA2-round** PL cantaloupe PL orange PL type.of.citrus 'The cantaloupes, oranges and *limas* are round'

The presence or absence of a vowel distinguishes these two prefixes in Coyachilla, Amatec, and Miahuatecan languages. The differences in pronunciation, productivity, lexical distribution and the syntactic differences noted by Munro (2007) all support one of the central conclusions of this paper, that stative 1 and stative 2 have separate histories.

As mentioned above, the languages which lack stative 2 are all languages thought to have diverged relatively early in Zapotecan linguistic prehistory, which is compatible with the idea that only stative 1 existed in Proto-Zapotecan and that stative 2 emerged later. No language still spoken in the Central Valleys or thought to have left this region after 1350 CE lacks stative 2, but eleven languages thought to have resulted from migrations out of the Central Valleys prior to the collapse of the city of Monte Albán ca. 800 CE do not have the productive stative 2 prefix (see §6). The fact that thirteen out of seventeen languages with stative 2 have deleted stative 1 before consonant-stems suggests to me that stative 2 first developed in a daughter of the language that deleted stative 1 before consonant-stems and may have then diffused to four other languages that retain stative 1 in all environments.

²⁰ Many Zapotec languages refer to livestock introduced by Europeans such as oxen and bulls with a noun derived from the perfective form of the verb 'to plow.'

5.3 The extension of Stative 2

In the last two sections we saw the four logical combinations of participating only in the loss of preconsonantal *n- (Papabuco, Sierra Juárez Zapotec), only in the innovation of stative 2 (Miahuatec, Amatec, Yautepec, Coyachilla), in both (Rincón, Cajonos, modern Central Zapotec) or in neither (Chatino, Totomachapan, Coatecan). Colonial Valley Zapotec provides us with an unexpected fifth scenario, in which stative 2 optionally extends onto the consonant-initial positional verbs left unmarked after deletion of the stative 1 prefix. All the examples in this section come from Foreman & Lillehaugen (2017).

Like all Zapotecan languages, Colonial Valley Zapotec preserves stative 1 on positional verbs with vowel-initial stems:

(29) tobi beni ni n-oo xini=ni
one person REL STA1-be.contained child=3
'a person who has children'

As in modern Central Zapotec, many positional verbs with consonant-initial stems have stative forms that were unmarked in Colonial Valley Zapotec. However, Foreman and Lillehaugen show that these alternate with *na*-marked forms that seem to be synonymous. Note that in the Colonial period there is orthographic variation between a single or double vowel in a stressed syllable, $\langle z \rangle$ and $\langle c \rangle$, $\langle u \rangle$ and $\langle b \rangle$. The verb 'stand' is unmarked in (30) but appears with *na*- in (31). 'Float' is also unmarked in (30) but marked in (32). The stative form of 'be stuck on' occurs unmarked in (33) but is marked with *na*- in (34).

(30) aca zoo chij acá zabi guela ca-naba=ja quinaa=rij
NEG STA.stand day NEG STA.float night POT-ask=1SG field=DEM
'The day doesn't exist, the night doesn't exist (that) I will ask for this field'

(31)	poerta	na-ço	roa+yoho
	door	STA-stand	mouth+house
	'the doo	or [that] is (stand	ling) in the doorway'

- (32) ti-nipea **na-saui** quelaquez xteni=a San Juan qulauia HAB-order.1SG **STA-float** guelaguetza POS=1SG San Juan Guelavía 'I declare that my *Guelaguetza*²¹ credit is owing in San Juan Guelavía'
- (33) layoo nijrij caa=ny guychij
 land said STA.be.sticking=3 paper
 'the aforementioned land is (sticking, written) on paper'

(34)	ni	na-ca	layoo	solar
	REL	STA-be.sticking	land	house.plot
	[the bill			

Foreman and Lillehaugen (ibid:282) conclude that "the *na*- and zero-marked stative forms of the consonant-initial positional verbs were in free variation during the CVZ period---if not within any single scribe's usage, then certainly between scribes."

Foreman and Lillehaugen consider data from a particular set of Zapotec varieties: Colonial Valley Zapotec, Tlacolula Valley Zapotec, Papabuco, Cisyautepecan, Cajonos Zapotec and Sierra Juárez Zapotec. It happens that most literature on Zapotecan syntax is on these languages. These languages cover a diverse geographical area, and Foreman and Lillehaugen had reason to believe that their sample was genetically diverse, because Operstein (2012b) had Papabuco diverging early and Smith Stark (2007) classified Cisyautepecan as "Southern Zapotec." However, all these languages are shaded in Map 2 because they delete preconsonantal nasals. The general lack of literature on positional verbs or stative marking in languages that preserve *n*- before consonants effectively obscured the existence of stative 1 as a separate prefix from stative 2. Though all Zapotecan languages preserve stative 1 before vowels, it is common for prefix vowels to delete when added to vowel-stems (Kaufman 2016, Beam de Azcona 2019a), making prevocalic *n*- look like a

²¹ *Guelaguetza* is a system of reciprocal "gifting" or credit and debt whereby families can lend or claim support from others when hosting ceremonies and festivals (Beals 1970: 234–235).

conditioned allomorph of *na*-. Faced with evidence of Colonial-era free variation between *na*- and zero and modern languages with unmarked consonant-initial positional verbs, it was reasonable to assume that the *na*-marked forms were in the process of being lost:

The alternation between *na*- and zero-marked statives for positional verbs in CVZ suggests that we may be seeing some evidence for the historical origin of zero-marked statives for positional verbs in Valley Zapotec...Given what we know about modern Valley Zapotec languages, it must be the case that at some point, the zero-marked stative spread across the consonant-initial positional verbs and became uniquely associated with them. (Foreman & Lillehaugen 2017: 282)

The loss of the stative prefix before consonant-initial roots did take place, but I propose that it targeted stative 1 *n-, not stative 2 *na-. Furthermore, since the loss of preconsonantal nasals is reflected in Papabuco and Sierra Juárez Zapotec, but the isogloss for the innovative stative 2 prefix *na- excludes Papabuco and Sierra Juárez Zapotec, it's reasonable to assume that preconsonantal nasal deletion took place before the Papabuco and Sierra Juárez Zapotec migrations but that the innovation of *na- took place afterwards. In §6 below I cite archaeological evidence dating a large migration to the Sierra Juárez between 600-800 CE. This suggests that the deletion of the stative 1 prefix took place perhaps a thousand years before Colonial Valley Zapotec. Rather than being in the process of losing *na- on positional verbs, it appears that Colonial Valley Zapotec was extending *na- onto consonant-stems that had previously been left unmarked (and would be again).

The idea that consonant-initial positional verbs would go from being marked with *n-, to being unmarked, to being marked with *na-, back to being unmarked at first looks like it needs a shave with Occam's razor. Nevertheless, this appears to be what happened once we take a wider variety of languages into account. An innovation takes time to spread through a language. The free variation between *na*- and zero in Colonial Valley Zapotec represents a time when an innovation had not been completely adopted.

Linguistic innovations first emerge in the speech of certain individuals...If that innovation presents some sort of appeal to the hearer...they may adopt it ...If carried out repeatedly and extensively across a social network, this process...results in the spread of a new speech habit across idiolects...After a period of competition with the previous norm, the innovation may become statistically dominant, and settle in the speech habits of a whole social group. (François 2015: 168)

What we are seeing in Colonial Valley Zapotec is a moment of competition between the previous norm, zero, and the innovation of *na*- on consonant-initial positional verbs. However, based on the general absence of stative 2 on positional verbs in modern Valley Zapotec varieties, we can conclude that this innovation did not become statistically dominant. Today one can find a few stative 2-marked verbs with positional semantics here and there, e.g. Tlacolulita Zapotec 'is hanging' /na-jăl/ and 'is stuck on' /na-cie/, that may be fossils from the time when speakers were experimenting with adding stative 2 to positional verbs, but such forms are not the norm, nor are they systematic, since they are found in languages that have unmarked stative forms for most positional verbs.

Although the stative 2 prefix is innovatory and its use on positional verbs fleeting, the use of na- on positional and stative verbs and participles in Colonial Valley Zapotec has shaped our understanding of stative-marking in Zapotecan linguistics up until now, obscuring the possibility that n- and na- are etymologically distinct.

5.4 The reduction of Stative 2

Outside of loanwords and compounds, pre-tonic syllables in Zapotec are prefixes. A majority of Zapotecan varieties have lost unstressed vowels historically. Uchihara (2021) shows that while the stative 2 prefix *na*- resists the loss of the vowel in many varieties (due, he argues, to its origin as a copula), others delete this vowel as well. For example, 'STA-angry' is /n-zí?tʃ/ in Quiaviní vs. Isthmus Zapotec /na-zi?itʃi/.

Table 4 provides cognates for 'thin.' The first three languages do not participate in the stative 2 innovation and *na*- is noticeably absent. Cajonos is a special case, discussed in §7. The other languages all have a prefix that occurs productively on this and other words. San Lucas Quiaviní is spoken in the Tlacolula Valley (part of the Central Valley Zapotec dialect continuum). Modern Tlacolula varieties can be thought of as the daughters of Colonial Valley Zapotec. It has been argued (Beam de Azcona 2018) that Petapa and Tlacolulita result from a fourteenth century migration that included people from the Tlacolula Valley because of several shared isoglosses. It would be strange to argue that *n*- in San Lucas Quiaviní is the stative 1 prefix based solely on its phonological form, because the languages that did not delete stative 1 before consonants (Chatino, Coatec, Miahuatec, Amatec) don't have *n*- in this word. The varieties and languages in Table 4 most closely related to San Lucas Quiaviní all have *na*-. *n*- in San Lucas Quiaviní is a reduced form of stative 2.

Stative 2	Subgroup	Variety/Language	'(be) thin'
No	Chatino	Zenzontepec Chatino	lati
	Coatecan	Coatec Zapotec	w-làts
	Papabuco	Zaniza Zapotec	las
Marginal	Cajonos	Zoogocho (Cajonos) Zapotec	las
Yes	Miahuatec	Miahuatec Zapotec	na-lât
	Amatec	Coatecas Altas (Amatec) Zapotec	na-làts
	Central	Colonial Valley Zapotec	na-lase
	Zapotec	Petapa (Transyautepecan) Zapotec	na-lăs:i
		Tlacolulita Zapotec	na-las
		San Lucas Quiaviní (Tlacolula Valley) Zapotec	n-lăs

Table 4: Words for 'thin'

The loss of the vowel from the na- prefix in varieties like San Lucas Quiaviní has rendered stative 2 homophonous with the stative 1 prefix preserved on positional verbs with vowel-initial stems in these varieties and on all positional verbs in other languages. This may be another factor that previously led Zapotecanists to collectively view stative 1 and stative 2 as the same morpheme. Seeing clear-cut cases of na- reducing to n- may have led us to assume that all Zapotecan n- stative markers were reduced forms of *na- as reconstructed by Kaufman (2016). The reality of two Zapotec stative prefixes with different etymologies is only revealed when we compare a wider variety of Zapotecan languages and consider not only form and meaning but also productivity and lexical distribution.

6. Divergence and convergence related to stative morphology

This section attempts to date the innovations identified in §4 and §5 through correlation with archaeological and ethnohistorical evidence. Preconsonantal nasal deletion is tentatively dated to 100 BCE - 600 CE in and around the city-state of Monte Albán (§6.1). Stative 2 is argued to have emerged in Eastern Zapotec between 800-1370 CE, before diffusing to other languages (§6.2). Both Monte Albán Zapotec and Eastern Zapotec, shown in Figure 1, are genetic groups proposed for the first time in this paper.²²

²² "Eastern Zapotec" in manuscripts by Terrence Kaufman (e.g. Kaufman 2007) refers to languages of the Isthmus of Tehuantepec (see also the synopsis of Kaufman's earlier classification in Smith Stark 2007: 96), and is not the same grouping being proposed here.



Figure 1: Diversification of major Zapotecan subgroups

²³ Proto-Zapotecan is currently reconstructed as having most consonants occur in single:geminate pairs, so by convention a form like "*(t)t" means "both *t and *tt," etc. In identifying this sound change Campbell (2018) refers to Kaufman (2016)'s reconstruction of *(t)t but I reconstruct this sound as $*(\theta)\theta$.

The Zapotec city of Monte Albán was founded in the Central Valleys region of Oaxaca ca. 500 BCE (Joyce 2010: 128). At that time there is archaeological evidence of Zapotec communities at sites around the Central Valleys region, and evidence of significant human occupation at sites on the Coast (Joyce 2010: 180) near where Chatino languages are still spoken today, but at this time depth there is no evidence of Zapotec settlement in the other regions they would come to inhabit, including the Sierra Norte and Sierra Sur. Since all Zapotec languages reflect pre-tonic develarization and a shift in prominence, which are not reflected in modern Chatino languages, and since the earliest archaeological evidence of Zapotec languages descend from varieties once spoken in the Central Valleys.

Monte Albán grew into what archaeologists consider a "state" ca. 200 BCE (Blomster 2008: 13), around the time that Zapotecs settle the Sola Valley (Balkansky 2002: 37, 85–86). Soltec, Totomachapan and Coyachilla in Figure 1 are spoken in what I call the *Western Relic Area*,²⁴ which encompasses the Sola Valley. While it's possible that these languages descend from later migrations, the first colonization of the Sola Valley took place between 300-200 BCE (Balkansky 2002: 37) and so the division between Core Zapotec and the languages of this relic area can have taken place no earlier than this time, based on current evidence. Both preconsonantal nasal deletion and the innovation of stative 2 take place in descendants of Core Zapotec, so this can be our starting point: post-tonic develarization, which defines Core Zapotec, likely took place sometime after 200 BCE.

6.1 Preconsonantal nasal deletion in Monte Albán Zapotec

As shown in Figure 1, I propose that the deletion of the stative 1 prefix before consonants divides Smith Stark's (2007) Core Zapotec into two daughters: Southern Zapotec and Monte Albán Zapotec. We can attempt to correlate this linguistic change with archaeological evidence of Zapotec migrations.

Southern Zapotec languages are spoken in an area that extends from the Ejutla Valley south to the Miahuatlán Valley and into the Sierra Sur mountain range to the west, south, and east. Archaeological evidence of the earliest settlements is so far confined to areas around the two valleys themselves. While earlier small settlements exist in Ejutla (Feinman & Nicholas 2013:183), large scale settlement in the Ejutla and Miahuatlán Valleys begins in

²⁴ Other authors have proposed a Western Zapotec subgroup that includes what I call Coyachilla as well as Totomachapan (Smith Stark 2007) and sometimes also Soltec (Sicoli 2015: 193). This grouping may be supported by new evidence in the years to come, but since so far it has been based on a retention (Smith Stark 2007) or variables also found in other Zapotec languages (Sicoli 2015), for now I treat these three languages as belonging to a relic area rather than comprising a clade, pending further research.

the Late Formative (400-100 BCE, cf. Markman 1981; Badillo 2019: 35). Since preconsonantal nasal deletion did not occur in Southern Zapotec, it probably occurred sometime after major Zapotec settlement in Ejutla and Miahuatlán. Since the languages that reflect preconsonantal nasal deletion are a subset of Core Zapotec, the nasal deletion is also likely to have taken place after pretonic develarization, which in the previous section I hypothesized was later than 200 BCE. Considering both these factors, I propose that stative 1 was deleted before consonant-stems in the Central Valleys sometime after 100 BCE.

Since Papabuco languages, Sierra Juárez, Cajonos, Rincón and Central Zapotec languages all have unmarked stative forms of consonant-initial positional verbs, I propose that preconsonantal nasal deletion took place in their common ancestor, before the different migrations out of the Central Valleys that led to the emergence of Papabuco and the modern Sierra Norte languages. I know of no archaeological or ethnohistorical evidence that would allow us to date any Papabuco migration but, based on the current model of linguistic diversification shown in Figure 1, I hypothesize that this migration may have been the first migration by speakers of a variety of Monte Albán Zapotec. Map 2 above showed the discontinuous isogloss for segmentally unmarked positional verbs resulting from preconsonantal nasal deletion. It is unlikely that this change diffused to Papabuco in its current location while skipping over Coyachilla and Totomachapan (see the appendix). Coyachilla and Totomachapan are the most divergent Zapotec languages spoken today, and it follows that the migration(s) that led to their development would have taken place earlier than any Papabuco migration. All these facts suggest that preconsonantal nasal deletion took place at a time when Coyachilla, Totomachapan and Southern Zapotec had already left the Central Valleys but prior to the Papabuco migration, which we cannot currently date with direct evidence, although we may hypothesize about the relative chronology of this migration vs. others.

All the languages of the Sierra Norte reflect preconsonantal nasal deletion and Zapotec migrations to this region are better attested. The migrations to the Cajonos region and the Rincón can be dated to the Late Postclassic in the two centuries preceding the Spanish invasion (Oudijk 2012: 29–31, see §6.2.1). More helpful for dating preconsonantal nasal deletion is the evidence of earlier Zapotec settlement in the Sierra Juárez.

Although there was some Zapotec settlement in the Sierra Juárez (the western part of the Sierra Norte) in the Late Formative (Winter & Markens 2012: 164), contemporaneous with major settlement in the Ejutla and Miahuatlán Valleys, modern Sierra Juárez Zapotec more likely reflects the speech of Late Classic period (600-800 CE) immigrants who increased settlement in the Sierra Juárez by 700% (Diego Luna 2021: 294–295). Preconsonantal nasal deletion is reflected in Sierra Juárez Zapotec but not in Southern Zapotec, consistent with

the idea that Sierra Juárez Zapotec descends mainly from the speech of later immigrants while Southern Zapotec languages descend from the language of earlier migrants.

Material culture, including architectural style, suggests that the Late Classic Sierra Juárez immigrants came from the Tlacolula Valley (one of the Central Valleys, Diego Luna 2021: 295). This migration may be related to the decline culminating in the collapse of Monte Albán ca. 800 CE (Blomster 2008: 16). If, based on the geolinguistic distribution of preconsonantal nasal deletion, we hypothesize that this change took place after the Southern Zapotec colonization of the Miahuatlán Valley and before the decline of the Monte Albán state led to new outward migrations to the Sierra Juárez and perhaps to the Papabuco region sometime earlier, then we can hypothesize a range of time during which preconsonantal nasal deletion could have taken place and diffused among Central Valleys idiolects, roughly 100 BCE - 600 CE.

The hypothesis just laid out is that preconsonantal nasal deletion took place in the Central Valleys at a time when Monte Albán was already a state and before it collapsed. I give the name "Monte Albán Zapotec" to the subgroup defined by this innovation. To be clear, other innovations likely took place in the Central Valleys during Monte Albán's existence, both earlier (e.g. the Core Zapotec post-tonic develarization) and later (e.g. the Nuclear Zapotec merger) than preconsonantal nasal deletion, but those subgroups already have names, and those innovations took place closer to the beginning and end of this city, whereas the estimated range of time for preconsonantal nasal deletion covers Monte Albán's heyday.

Map 4 illustrates the hypothesis that preconsonantal nasal deletion took place after the departure from the Central Valleys of Zapotecan-speaking peoples whose descendants retain stative 1 on consonant-stems today but before any outward migration of people with zero-marked stative forms of consonant-initial positional verbs. For each area or subgroup, the reconstructed²⁵ stative form of the verb 'sit' is shown as it would have been shortly after preconsonantal nasal deletion. This verb is convenient because it illustrates three major innovations that had driven diversification within the family up until this point. The Chatino form is conservative in its retention of the stative 1 prefix *n-, labiovelar consonant, and final prominence. The relic area differs in that it reflects the shift in prominence to the penult. Southern Zapotec has additionally undergone post-tonic develarization, as evidenced by *p, and Monte Albán Zapotec has deleted the stative 1 prefix in the preconsonantal environment.

²⁵ Reconstructions cited throughout are my own except where otherwise stated. I reconstruct as *t a sound which occurs in the verb 'sit' and which Kaufman (2016) reconstructs as *s.

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Map 4: Forms for 'is sitting' ca. 100 BCE-600 CE (Map data: Google)

Note that with the linguistic divisions proposed for this time depth, the Zapotec varieties which retain nasal-marked stative forms of consonant-initial positional verbs are all adjacent to Chatino. Speakers of Zapotec varieties which retained preconsonantal *n may have been in more frequent contact with Chatino speakers and had closer social ties to them than to the Zapotec speakers in the Central Valleys who deleted preconsonantal nasals. Chatino conservatism with respect to preconsonantal nasals may be a factor in their retention in the Western Relic Area and Southern Zapotec. These forms of Zapotec emerged as separate varieties from the Zapotec spoken in the Central Valleys due to migrations aimed at establishing trade routes between the Zapotec state of Monte Albán and the Chatino territory on the Coast (Balkansky 2002: 35, Feinman & Nicholas 2013:

19). I conceive of these languages, together with Chatino, as being spoken across a *Southern Trade Network,* where speakers of neighboring languages experienced sociolinguistic affinities with one another. Non-participation in preconsonantal nasal deletion, rather than reflecting isolation and ignorance of linguistic trends happening in Monte Albán, may reflect stronger social ties within the Southern Trade Network at the time when preconsonantal nasal deletion diffused throughout the Central Valleys.

Today the Papabuco languages neighbor Chatino, Totomachapan and Coyachilla. Modern Papabuco languages do have preconsonantal nasals (in words other than positional verbs). Many of these words appear to be borrowed from languages which retained preconsonantal nasals. For example, compare Texmelucan Papabuco (Speck 1978) 'weasel' /ngwaa/ to Tataltepec Chatino /nkwkwã/ [ŋgwã] (Sullivant 2015: 86), 'chachalaca (bird)' /ŋgaʃ/ with Southern Zapotec /ngá?[/, 'egg' /nguu/ with Coatec /ngû/, and 'seed' /mbirj/ with Coatec /mbîð/ and Miahuatec /mbíz/ (< Proto-Zapotecan *kwe?t^ji?). Such loans may have made preconsonantal nasals a phonotactic possibility again in Papabuco. Additional NC clusters in Papabuco may have formed recently through pretonic vowel deletion. For example, contrafactual verb forms are cited by Speck & Pickett (1976) which appear to add a nasal prefix to a stem that is segmentally identical to the potential form of the verb, as in two different 'go' verbs, one with a potential /g-ja/ and contrafactual /n-g-ja/ and the other with a potential /tf-a/ and contrafactual /n-tf-a/. The /n-/ prefix may be cognate with a contrafactual /ni-/ prefix found in Colonial Valley Zapotec. The fact that modern Papabuco has NC clusters that came about more recently through borrowing and perhaps other changes, attests to preconsonantal nasal deletion being an older change, consistent with the idea that it predates the Papabuco migration to the Sierra Sur.

As seen above in Figure 1, the proposed Monte Albán Zapotec subgroup fits neatly inside of Smith Stark's (2007) Core Zapotec. Preconsonantal nasal deletion affects all Core Zapotec languages except those classified as Southern Zapotec by Beam de Azcona (under review), who excludes two languages, Tlacolulita and Cisyautepecan (see the appendix), which Smith Stark included in Southern Zapotec, but which delete preconsonantal nasals.

Operstein (2012b) also used the term "Core Zapotec" but with a different definition and her grouping has been renamed "Nuclear Zapotec" by Eric Campbell (2021: 357). Nuclear Zapotec is defined by the merger of the palatalized stops $*(t)t^{j}$ with the alveolar²⁶ affricates $*(t)t^{s}$. Most of the languages which reflect this merger belong to Monte Albán Zapotec. However, the merger is also found in three languages classified as Southern Zapotec (Beam

²⁶ Operstein (2012b: 25) and Suárez (1973) reconstruct this affricate as $*(t)\hat{tf}$. Both alveolar and postalveolar reflexes are common among the earliest diverging Zapotecan subgroups and I have also entertained the postalveolar hypothesis but now consider the alveolar affricate better supported by Proto-Popolocan cognates 'grindstone' *su?-tsi?, 'honey' *tshẽ, and 'rabbit' *(J?a)tse? (Fernández de Miranda 1951)

de Azcona under review). At first glance this would seem to put the Monte Albán Zapotec proposal at odds with the Nuclear Zapotec proposal. However, we can consider Nuclear Zapotec to be a daughter of Monte Albán Zapotec, as shown in Figure 1, if we consider the merger to be diffused to certain Southern Zapotec languages from one or more Nuclear Zapotec languages. I will return to this idea below in §6.2.3

6.2 Inheritance and diffusion of stative 2

Table 5 shows that all languages which reflect preconsonantal nasal deletion also underwent post-tonic develarization but the reverse is not true. This situation lends itself to a cladistic tree model in which Monte Albán Zapotec is a daughter of Core Zapotec. Looking only at daughters of Monte Albán Zapotec, we see that a subset comprised of Cajonos, Rincón and Central Zapotec has the innovative stative 2 prefix which is not present in Papabuco or the Sierra Juárez. This suggests that Cajonos, Rincón and Central Zapotec form their own subgroup, having developed from a daughter of Monte Albán Zapotec that I call Eastern Zapotec. However, stative 2 is also found in four languages that are not part of Monte Albán Zapotec. I propose that stative 2 is an Eastern Zapotec innovation that diffused to certain other languages through contact.

			Language/subgroup	Post-tonic	Preconsonantal	Stative 2 <
				develarization	nasal deletion	*n-COPULA
			Totomachapan			
			Coyachilla			\checkmark
			Coatecan	\checkmark		
	ern		Miahuatec	\checkmark		\checkmark
uth	outh		San Bart. Yautepec	\checkmark		\checkmark
pote	Sc		Amatec	\checkmark		\checkmark
Zal			Papabuco	\checkmark	\checkmark	
ore	lbár		Sierra Juárez	\checkmark	\checkmark	
C	ê A	u	Cajonos	\checkmark	\checkmark	\checkmark
	onte	Ister	Rincón	\checkmark	\checkmark	\checkmark
	Μ	Ea	Central Zapotec	\checkmark	\checkmark	\checkmark

Table 5: Distribution of three chronologically ordered innovations in Zapotec

Since before the founding of Monte Albán ca. 500BCE (Joyce 2010: 128), the Central Valleys region has been the place of origin for most Zapotecan migrations. When Zapotecan peoples have expanded into previously unoccupied territory, or into places that had been occupied by non-Zapotecan people, the result has been divergence between the speech of migrant communities vs. the varieties spoken by people who remained in the Central Valleys. However, when migration has put new Zapotecan migrants into contact with the descendants of earlier Zapotecan migrant populations, the result is often convergence between the Zapotecan varieties that come to be neighbors (see, for example, Beam de Azcona under review on the diffusion of the realis prefix from Chatino to Southern Zapotec). Zapotecan migration thus has a role in both genetic divergence and areal convergence.

In §6.2.1 I use the uneven distribution of stative 2 in the Sierra Norte, as well as ethnohistorical evidence, to argue that Northern Zapotec (Smith Stark 2007) is not a valid genetic subgroup but instead the Sierra Norte is home to three distinct Zapotec languages that have resulted from separate migrations. In §6.2.2 I consider the possible diffusion of stative 2 to Coyachilla Zapotec, one of the first Zapotec languages to diverge. §6.2.3 updates the internal classification of Southern Zapotec and argues that some Southern Zapotec languages acquired stative 2 and other variables from Central Zapotec speakers who migrated to the Sierra Sur in the fifteenth century.

6.2.1 Multiple waves of Sierra Norte²⁷ migration

In terms of intelligibility there are three Zapotec languages in the Sierra Norte, shown in Map 5. These are Sierra Juárez Zapotec, Cajonos Zapotec, and Rincón Zapotec. Though often treated as separate languages by non-Zapotec-speaking linguists, the varieties of Choapan and the Rincón are mutually intelligible according to speakers such as Nelson Martínez Pérez and Zaira Hipólito López (p.c.) of Tanetze de Zaragoza. Though outsider linguists' classifications often lag behind, the Zapotec ethnotaxonomy of languages recognizes this fact by using the name *Dídza Xìdza* /dídza ʃidza/ for varieties of both the Rincón (Martínez Pérez 2019) and Choapan (cf. Donnelley 2012, who records it as /didza ʃiʔidza?/) but *Dill Xhon* /diʒ zon/ for Cajonos Zapotec (Castellanos 2003).

²⁷ Some people make a distinction between the *Sierra Juárez* and the *Sierra Norte*. However, my use of *Sierra Norte* is inclusive of the Sierra Juárez.

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Map 5: Geography of the Sierra Norte and Central Valleys (Map data: Google)

Smith Stark (2007) proposed Northern Zapotec as a genetic group, but more isoglosses connect one or two of these languages to other Zapotec varieties than unite these three. For example, stative 2 is found in Cajonos and the Rincón, as well as Central Zapotec, but not in the Sierra Juárez. Another isogloss for a variable I'll call "alienable *f*-" closely coincides with that of stative 2. This variable involves a derivational prefix **f*- found fossilized on inalienable nouns throughout Zapotecan, which was reinterpreted as an inflectional marker of alienable possession and changed its phonological behavior such that it provokes fortition in the following consonant. Like stative 2, alienable *f*- is found in all of Central Zapotec, Cajonos and the Rincón but not in Sierra Juárez Zapotec.

The lack of stative 2 and alienable *f*- in the Sierra Juárez can be understood when we consider interdisciplinary evidence about the history of migration to the Sierra Norte. As mentioned in §6.1, a Zapotec presence was first established in the Sierra Juárez ca. 300 BCE (Diego Luna 2021: 86), but this region was swamped with a large influx of new immigrants from the Tlacolula Valley in the Late Classic period ca. 600-800 CE. If stative 2 did not yet exist at the end of the Classic period it would explain why Sierra Juárez lacks stative 2.

Oudijk (2012: 29–31) identifies two major Postclassic Zapotec migrations to the Sierra Norte. In the second half of the fourteenth century, the leader of the Postclassic Zapotec capital of Zaachila, Lord 11 Water Cosijoeza (/kosijo'wesa/), instituted expansionist policies that would seize territory to the east from Mixes and others. This was carried out through military campaigns north to Cajonos by way of the Sierra Juárez, and south to the Valley of Nejapa along the trade route to the Isthmus of Tehuantepec. Cocijoeza's activities have been dated to roughly 1370 CE (Burgoa 1989 [1670], Oudijk 2008a: 110). As part of Cocijoeza's military campaigns, he sought an alliance with the Mixtees, sealed by marrying two of his children to Mixtec nobles and by granting the Mixtecs land in Cuilapan, near the then-Zapotec capital of Zaachila. Some eighty years later, ca. 1450 CE, one of these marriages led to a dynastic crisis in the royal house of Zaachila. This resulted in one faction of the royal family fleeing south to go into exile in the Isthmus of Tehuantepec, while a Mixtec faction remained behind in Zaachila. The resulting political instability in the Central Valleys led to waves of refugees who sought security elsewhere. Some refugees from the Valley of Tlacolula, who perhaps had family connections to those who had colonized Cajonos decades earlier, went there. Others, from unknown parts of the Central Valleys, fled to the Rincón, from whence Choapan was later colonized. Migration in the wake of the dynastic crisis was continuous up to and following the Spanish invasion some 70 years later. At least part of the area that came to be occupied by speakers of Cajonos and Rincón Zapotec was probably populated by speakers of Mixe and Chinantec not long before Zapotec immigration to the area commenced, and the interethnic conflicts were on-going at the time of the Spanish invasion (Chance 1989: 14).

The combined archaeological and ethnohistorical evidence suggests that Zapotec colonization of Cajonos and the Rincón commenced within a century of one another, whereas the Sierra Juárez was settled several centuries earlier. This chronology correlates with speakers' impressions about the Cajonos and Rincón languages being similar but quite distinct from Sierra Juárez Zapotec. I posit the Eastern Zapotec subgroup based on the idea that stative 2 and alienable *f*- emerged during the Postclassic in the Central Valleys after the Sierra Juárez and Papabuco migrations but before the Cajonos and Rincón migrations, roughly 800 - 1370 CE. Map 6 shows hypothetical linguistic divisions on the eve of Cocijoeza's military campaigns in the fourteenth century.

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Map 6: Hypothetical linguistic divisions ca. 1360 CE (Map data: Google)

6.2.2 Possible diffusion of stative 2 to Coyachilla from Central Zapotec I refer to a "Coyachilla dialect continuum" due to high intelligibility scores in Egland et al. (Egland, Bartholomew, & Cruz Ramos 1978) between the neighboring Lachixío, Los Altos and Mixtepec varieties. I take the name from Sicoli (2015: 194), who reports oral history "attributing their origins to a single population center at a now abandoned site called *Coyachilla.*" As shown above in Table 5, the isogloss for stative 2 crosscuts the earlier isoglosses for post-tonic develarization and preconsonantal nasal deletion by extending into Coyachilla. Parallel innovation and diffusion from Eastern Zapotec are both plausible.

There is philological evidence for Early Postclassic social connections between speakers of the Mixtepec variety of Coyachilla and speakers of Eastern Zapotec. Oudijk (2008: 107) refers to the genealogy of *Quialoo*, or Santa Cruz Mixtepec, and describes how two

"brothers" went to Zaachila to bring back a nobleman named *Pechetene* to be their new ruler. Oudijk calculates that this event took place in the twelfth century. One can easily speculate about how the stative 2 prefix might diffuse in the Coyachilla clade of topolects if the resident elites spoke a Central Valleys variety with just such a prefix. However, contact with the neighboring Central Zapotec languages of San Bernardo Mixtepec and Ayoquezco de Aldama is another possible source for stative 2.

These Coyachilla varieties were grouped together with Totomachapan as part of a Western Zapotec grouping by Smith Stark (2007), but since he defined this subgroup by non-participation in post-tonic develarization rather than a shared innovation, I treat them (see Figure 1) separately for the time being until convincing shared innovations can be found.²⁸ Whether there was ever a Proto-Western Zapotec language or whether Totomachapan and Coyachilla's last common ancestor was Proto-Zapotec, the presence of stative 2 in Coyachilla but not Totomachapan contributes to their divergence from one another. Most of the words with *ne-* in Coyachilla either lack a stative prefix in Totomachapan, such as 'lukewarm' Lachixío /ne-ze?e/~Totomachapan [za?a], or are perfective-marked stative participles in Totomachapan, such as 'toasted' Lachixío /ne-zoso/~Totomachapan [u-zuʃu].

In the last section I gave a hypothetical range of time from 800 – 1370 CE during which stative 2 could have developed. If Coyachilla acquired stative 2 via diffusion related to Pechetene's arrival, we could narrow the window for this innovation to perhaps 800-1100 CE. However, at present the evidence is not strong enough to rule out the possibilities of parallel innovation or borrowing from a neighboring language. If the presence of Central Zapotec speakers in neighboring communities like San Bernardo Mixtepec and Ayoquezco could be dated, this additional evidence could be considered, but for now the dates for stative 2 rest on the Sierra Norte evidence.

6.2.3 Contact between Central and Southern Zapotec in the Sierra Sur Innovations in stative marking are relevant to the classification of languages belonging to the Southern Zapotec subgroup. Changes proposed in this section with respect to previous classifications are summarized in Table 6. Language (and small subgroup) names listed are as used in this paper and may differ from how they appear in the works cited.

²⁸ Sicoli (2015: 92) mentions a couple of possible Western Zapotec innovations in verbal morphology, but both are found in other Zapotec languages outside this group.

	Smith (2007)	Operstein (2012b)	This paper
Outside of Nuclear Zapotec		Coatecan	
Southern Zapotec	Coatecan Miahuatecan Amatec Cisyautepecan Tlacolulita	Miahuatecan Amatec most Cisyautepecan varieties	Coatecan Miahuatecan Amatec
Central Zapotec		Quiegolani variety of Cisyautepecan	Cisyautepecan Tlacolulita

Table 6: Differences in the classification of Southern Zapotec languages

Both Tlacolulita Zapotec and the Cisyautepecan dialect continuum, shown below in Map 7, were included in Southern Zapotec by Smith Stark (2007), but based on their deletion of stative 1 before consonants must descend from Monte Albán Zapotec. Their use of stative 2 and alienable *f*- suggests that they belong to Eastern Zapotec, an idea supported by their inclusion in several Central Zapotec²⁹ isoglosses (Beam de Azcona 2018; 2019b).

Operstein (2012b) included Southern Zapotec in what is now called Nuclear Zapotec based on the merger of *(t)t^j with *(t)ts before *i in Miahuatecan, Amatec, and Cisyautepecan varieties such as Xanica, but she excluded Coatecan (which includes Coatec and San Vicente Coatlán Zapotec) from Nuclear Zapotec, based on lack of participation in the merger. In this part of the Sierra Sur region, the languages with stative 2 are the same languages that participate in the merger, shown as shaded in Map 7. At first glance, this bundling of two isoglosses might seem to support Operstein's classification. Nevertheless, Coatecan shares numerous variables with Miahuatecan (which includes Miahuatec and San Bartolo Yautepec Zapotec) and Amatec. Of all Zapotec languages, only Coatecan, Miahuatecan and Amatec have the *n- realis prefix, which is proposed to have developed out of the stative 1 prefix (Beam de Azcona under review). In this section I propose, based on linguistic and ethnohistorical evidence, that both the merger and stative 2 were diffused

²⁹ Operstein (2012a: 16-17) classified the Cisyautepecan variety of Quiegolani as Central, based on its reflexes of $*(t)t^{j}$ and $*(t)t^{s}$, but included other Cisyautepecan varieties, e.g. Xanica, in Southern Zapotec.

from Central Zapotec to Miahuatecan and Amatec, and that current evidence does not support separating these languages from Coatecan in a different genetic subgroup.



Map 7: Southern Zapotec and adjacent Central Zapotec languages (Map data: Google)

San Andrés Mixtepec, shown in Map 7, is a Cisyautepecan-speaking community for which a painted *lienzo* exists that records the migration of members of the royal family of Zaachila to the Sierra Sur, staying for one generation in the Miahuatec-speaking town of Cuixtla before moving on to found San Andrés Mixtepec (Oudijk & Dumond 2008). A formula of 23.5 years per generation used by Oudijk (2008) puts this migration from Zaachila to the Sierra Sur sometime in the fifteenth century, perhaps related to the dynastic crisis mentioned above in §6.2.1. Since the document mentions that these migrants stayed in a Miahuatec-speaking town long enough to raise a new generation until they were old enough to found a new, Central Zapotec-speaking community, the picture that emerges is one of intense contact between allied speakers of Central and Southern Zapotec varieties in the Sierra Sur of the fifteenth century and thereafter

The internal diversification of Southern Zapotec is to a large extent driven by patterns of diffusion (see Babel et al. 2013, who identify similar patterns in Western Numic and propose that diffusion from external sources is a common route to clade-internal diversification). Chatino influence, which includes realis morphology (Beam de Azcona under review), depalatalization of *(t)t^j in Coatecan, and numerous loanwords, is older and is gradient, losing strength as one moves from west to east: Coatecan > Miahuatecan > Amatec. Influence from Central Zapotec, especially the neighboring Cisyautepecan language, is more recent and is stronger in the east. This is illustrated in Table 7 which shows selected features found in Cisyautepecan and their presence in Southern Zapotec languages, which are listed in geographical order from west to east. Miahuatec is divided into western varieties on the one hand and the San Agustín Mixtepec variety (shown above in Map 7) on the other hand. Coatecan languages, located in the west, do not participate in any of these innovations and are the only Southern Zapotec languages which do not border Cisyautepecan (see Map 7). Cisyautepecan itself has certain traits, here represented by zero-marked stative forms of consonant-initial positional verbs, that are not found in any Southern Zapotec language. Excluding Coatecan, all other varieties of Southern Zapotec show varying degrees of Central Zapotec influence, probably from Cisyautepecan.

Coatecan	Western Miabuatec	Amatec	San Agustín	Yautepec	Cisyautepecan	
	Whattudee		Mixtepec			
						Stative 2
						Merger
						Alienable ∫-
						V?/V?V
						contrast
						*lã?-initial
						pronouns
						Inanimate sandhi ³⁰
						Zero stative
						1 before C

Table 7: Cisyautepecan/Central Zapotec influence in Southern Zapotec

³⁰ This refers to sandhi caused by a floating high tone that occurs with inanimate nouns and is described in San Bartolo Yautepec by Covarrubias (2020: 88) and in the San Pedro Mixtepec variety of Cisyautepecan by Antonio Ramos (2015: 229).

Based on the ethnohistorical evidence that speakers of one or more varieties ancestral to Cisyautepecan arrived in the Sierra Sur in the fifteenth century (where they were in documented close contact with Miahuatec speakers), and the linguistic evidence that Southern Zapotec varieties show varying degrees of convergence with Central Zapotec depending on their proximity to Cisyautepecan, I propose that the Nuclear Zapotec innovation of the merger, as well as the Eastern Zapotec innovations of stative 2 and alienable *f*-, are diffused from Cisyautepecan into Miahuatecan and Amatec. The fact that alienable *f*- is found in San Bartolo Yautepec and San Agustín Mixtepec but not in other varieties of Miahuatec is a clue to this trait being diffused and not reconstructable to Proto-Miahuatecan. If these variables are not inherited in Southern Zapotec, it becomes unnecessary to exclude Coatecan from Southern Zapotec as Operstein did.

7. Problematic stative 2 data and their solutions

Stative-marked forms from two languages require further explanation: Cajonos (§7.1) and Zenzontepec Chatino (§7.2).

7.1 ň- in Cajonos

Cajonos Zapotec has numerous varieties. The better documented ones (Yalálag, Yatzachi, Zoogocho, Zoochina) have a stative prefix /ň-/. As shown earlier in Table 2, the Zoogocho dictionary only has 25 entries that appear to be stative-marked forms. The Yatzachi dictionary is similar at 19. The low number of attested words as well as the non-syllabic form of the prefix at first led me to the impression that Cajonos only had the stative 1 prefix. However, it turns out that /ň-/ is just a reduced form of stative 2, and the limited number of stative-marked dictionary entries for this language vs. others probably results from different lexicographic decisions about whether to treat stative-marked forms as participles that count as unique lexical items or as inflected verb forms that don't warrant their own dictionary entry separate from the citation form.

Of seventeen positional verbs documented in Yalálag by Alonso Ortiz (2020), three are vowel-initial stems marked with stative 1 n-, shown at the top of Table 8. Of the fourteen consonant-initial stems, eleven are segmentally unmarked, here exemplified by 'be contained,' 'be seated' and 'be standing.' Only three consonant-initial positional verbs take the prefix n- in Yalálag, shown at the bottom of Table 8. In the neighboring Rincón Zapotec language, in which stative 2 na- is ubiquitous, most positional verbs are segmentally unmarked if they are consonant-stems. However, the same verbs marked with n- in Yalálag are marked with na- in the Rincón.

	Yalálag (Cajonos)	Tanetze (Rincón)
'be hanging'	n-àl	n-àl·a?
'be dispersed'	n-ás	n-ás
'be lying adjacent (of small things)'	n-ìt	n-íta?
'be contained (pl.)'	zà?à	dzi?i
'be seated'	3ì	ĥ
'be standing'	sè	zé:?
'be piled'	n-k ^w â	na-k ^w à?
'be extended'	n-ʒiĬĸ	na-dʒìlaʁ
'be rolled up'	n-dúb	na-dùb

Table 8: Stative forms of positional verbs in Cajonos and the Rincón

Since Cajonos and Rincón descend from Monte Albán Zapotec, which deleted stative 1 *nbefore consonantal-initial positional verbs, the last three verbs in Table 8 are surprising. If the Cajonos prefix were the stative 1 prefix, we would expect to find n-marked forms in Southern Zapotec. A search for cognates found the transitive verb /-kwà?/ 'to pile' in Miahuatec. A related stative 2-marked participle in Miahuatec is /na'kwà?/ 'thick, dense' (e.g. a forest full of trees). The Coatec cognate meaning 'thick' is /kwa?/. Coatec doesn't have a productive stative 2 prefix and lacks a prefix on 'thick,' even though it preserves stative 1 *n*- on positional verbs. Miahuatec also preserves stative 1 *n*- on positional verbs but additionally forms adjectives with the stative 2 prefix *na*-. 'Be piled' (and perhaps also 'be extended' and 'be rolled up') may be a positional verb in terms of its synchronic semantics in the Sierra Norte, but the comparative evidence from Southern Zapotec suggests that it did not historically belong to the formal class of positional verbs that took the stative 1 prefix. Instead, there was an adjective related to the transitive verb 'to pile' and from this adjective a new stative predicate was derived by the addition of the copular stative 2 prefix, which then reduced to ň- in Cajonos varieties like Yalálag.

Although relatively few stative forms appear as dictionary entries for Yatzachi and Zoogocho, López Nicolás' description of stative/resultative morphology in Zoochina sounds fairly productive. Additionally, a Cajonos Zapotec dictionary put together by the Zanhe Xbab Sa collective (Zanhe Xbab Sa 1995) was compiled by a group of Cajonos Zapotec speakers from various towns. This dictionary lists more than sixty words that look like stative forms. Furthermore, in the stative forms listed in the Zanhe Xbab Sa dictionary, we find both ň-marked forms and nV-marked forms depending on the contributing variety. For example, the stative form 'cut' in Yojovi is listed as <nashibe>. In the Yatzachi dictionary (Instituto Lingüístico de Verano 2000) we can find this word as <nžibe>. Thus,

both language-internal and external comparative evidence suggests that the ň- prefix that occurs before consonants in some Cajonos varieties is a reduced form of the stative 2 prefix.

While the lower number of stative 2 forms in Cajonos dictionaries is due at least in part to lexicographic decisions, it's also possible that Cajonos reflects an earlier stage in the development of stative 2, with fewer forms existing at the time (and/or the place of origin) of the Cajonos migration compared to the Rincón migration a century later. For example, in the word for 'thin' above in Table 4, the Cajonos form lacks the stative 2 prefix that is present in all the other languages that have stative 2. This hypothesis needs further investigation, but if stative forms in Cajonos turn out to be less numerous than in other languages, it could suggest that the timeline for the development of stative 2 is closer to the end of the 800-1370 CE range proposed above.

7.2 /la-/ in Chatino

The biggest challenge for the argumentation presented throughout this paper is the existence of deverbal adjectives marked with *la*- in Chatino. Take for example Zenzontepec Chatino words compiled by Campbell and Carleton (in press), like /lā-nā?á/ 'loose' and /lā-kúti/ 'soft.' I count 22 such words in their 931-page dictionary. In a future paper I intend to argue that Zapotecan nasals and laterals go back to the same source in Eastern Otomanguean, their distribution originally conditioned by the orality or nasality of nearby vowels, before eventually becoming contrastive in Zapotec. The stative 1 marker in Chatino occurs with both nasal and lateral realizations (see Table 2). If we consider that */l*/ was originally an allophone of *n, then Chatino *la*- looks a lot like stative 2. This leads us to the following logical possibilities.

The *la*- forms could have developed from some other source, different than the copula or the stative 1 marker.

The *la*-forms could be borrowed from a Zapotec language with stative 2, but Coyachilla and Miahuatec are the closest languages to Chatino with stative 2 and by the time I argue that they acquired the prefix they were probably not adjacent to Chatino.

Kaufman (2016)'s reconstruction of the one and only Proto-Zapotecan stative marker as *na- could be correct. If this were the case, we would lose the explanation for why there are two different stative markers, *n*- and *nV*-, occurring in the same preconsonantal environment but in different lexical items in Coyachilla, Miahuatecan and Amatec. To explain the unmarked stative forms of positional verbs in some languages we would have to go back to describing the sound change that deleted the stative prefix before consonant-

stems as lexically conditioned, since *na*- does occur on numerous other consonant-stems (see footnote 17 for additional support for the phonological explanation). We would lose the diachronic explanation for the syntactic differences between stative 1 and stative 2 pointed out by Munro (2007). Uchihara's (2021) argument that *na*- retains the vowel in some languages that otherwise delete pre-tonic vowels because it is recently and transparently derived from the copula, would go out the window if *na*- is a prefix that goes back more than 2,000 years to Proto-Zapotecan. The cost of this solution outweighs the benefit. An intermediate alternative would be to argue that both stative 1 and stative 2 existed as separate prefixes in Proto-Zapotecan, but this would require that we explain why stative 2 would be lost independently in Totomachapan, Coatecan, Papabuco and the Sierra Juárez.

The *la*-forms could be a parallel but independent development in Chatino. Like Eastern Zapotec, Chatino would have inherited the copula *akka from Proto-Zapotecan, which could be marked with stative 1 and combine with the same kinds of constituents as in other Zapotecan languages. Given the same original building blocks, it's possible that two (or perhaps three including Coyachilla) branches of Zapotecan could experience drift in the same way. Like Nuclear Zapotec (see the Sierra Juárez and Central Valley examples cited in §5), Chatino appears to have a reduced form of the stative marked copula, *l-aa* (Campbell 2014: 361). Not all Zapotec languages have such a reduced form of the copula. In Coatec and Miahuatec there are some compound verbs that look like they have a reduced form of the copula as the first root, where phonological reduction would not be unusual, but such a reduced form cannot occur independently. The lack of an independent but reduced copula in some Zapotec languages, along with the lesser degree of productivity of the *la*-prefix in Zenzontepec Chatino, leads me to favor the parallel innovation hypothesis.

8. Conclusions and topics for future research

This paper has proposed separate etymologies for two prefixes which have similar, sometimes even identical, forms and meanings and which have often been treated as one and the same. Because stative 1 and stative 2 are phonologically and semantically similar, a crucial clue to their separate development has been a difference in productivity and lexical distribution. Where historical evidence exists for migration out of the Central Valleys from the fourteenth century or later, all the languages that result from such migrations (Cajonos, Tlacolulita, Transyautepecan, Isthmus, Rincón and Cisyautepecan Zapotec) have a productive stative prefix, and the same can be said for languages that remain in the Central Valleys to this day. In languages thought to result from earlier migrations, some have a productive stative prefix and others do not, a pattern here proposed to result from late diffusion to some languages that had previously diverged. Productivity is thus an important factor to consider along with phonological, morphosyntactic and semantic differences.

In historical linguistics we tend to assign great significance to shared innovations as proof of either close genetic relatedness or else contact (Hock 1991: 579, Campbell & Poser 2008: 155), while ignoring retentions of conservative features when proposing genetic subgroups or areal relationships. However, contact is not only evidenced by diffusion but can also promote retention of conservative features. Contact explanations for retention have been invoked in other parts of the world, such as the possible retention of the lateral fricative and affricate in Southern Cushitic (Kießling, Mous, & Nurse 2007). Here I proposed that the types of Zapotec which did not adopt preconsonantal nasal deletion were at the time located adjacent to Chatino, a branch of Zapotecan that is conservative in this respect. It is not credible to think that Zapotec speakers in the Southern Trade Network would have been ignorant of Central Valleys norms. Instead, their retention of preconsonantal *n rather than adopting a Monte Albán Zapotec innovation may have been motivated by more frequent social contact with their conservative Chatino neighbors.

Within Zapotecan linguistics, Suárez (1990 [1977]) emphasized cross-linguistic diffusion:

We don't believe that more data will change...the uselessness of focusing on relationships in a family tree model; the...distribution of isoglosses indicates that there have been in play different centers of diffusion, migrations, changes in cultural contacts and factors relating to geographic position. (Suárez 1990:50 cited in Smith Stark 2007:86, my translation)

Conversely, Smith Stark (2007) strove to establish what below he refers to merely as "coherent zones" but which he presents hierarchically including groups and subgroups which can be understood as a diversification-based genetic proposal.

In a certain sense, my work tries to counter this vision of Zapotec that emphasizes the lack of well-defined areas, with another in which it is possible to demarcate certain discrete zones...As is to be expected in a zone where closely related languages share a long history of interaction and various population movements, tracing the distribution of shared linguistic features can create the impression of a network of crisscrossing isoglosses that don't define discrete zones, as Suárez ([1977] 1990) reported. Nevertheless, I believe that it is possible to find certain coherent zones *if one chooses the features examined with care.* (Smith Stark 2007:86, 98, my translation and italics).

Smith Stark's proviso "if one chooses the features examined with care" suggests that establishing genetic subgroups based on certain features requires that we ignore others, or that if we aren't selective in our consideration of linguistic innovations we will find "a network of crisscrossing isoglosses." I propose that Zapotecan linguistics must now embrace a model of linguistic change which recognizes that sociolinguistic affinities may shift back and forth over time and that varieties that once diverged sometimes converge again. The task is not to prioritize some changes as genetically relevant and dismiss others as mere "diffusion" (since ultimately all changes begin with diffusion between idiolects) but rather to locate changes relative to one another along a timeline and identify varieties that shared innovations at relatively earlier and later moments in history. To categorize a given language as either "in" or "out" of a permanent grouping once and for all is not satisfactory; we must identify which sociolinguistic networks specific varieties participated in at different stages in their development. Just by looking at innovations in stative marking and attempting correlations with ethnohistorical and archaeological evidence in this paper, possible contact-related phenomena have been suggested in parts of the Sierra Sur region at different times, illustrated in Map 8. For Coyachila, Amatec and Miahuatecan, but most convincing in the latter two cases, there has been a shift in sociolinguistic interactions, with Chatino influence playing a greater role early on with the retention of stative 1 *n- before consonants, perhaps in the Classic period, but influence from Central Zapotec becomes more apparent in the Postclassic with the adoption of stative 2.



Map 8: Social networks in the Sierra Sur over time (Map data: Google)

Though the relative chronology of innovations can be determined by purely linguistic factors, the Zapotecan family benefits from numerous archaeological and ethnohistorical studies with which one can attempt to correlate linguistic hypotheses. Correlation with cross-disciplinary evidence can help us understand the social factors involved in both divergence and convergence, and assign tentative dates to linguistic changes. For example, archaeological evidence dates the first large population influx to the Sierra Juárez at roughly a millennium later than major settlement of the Southern Zapotec area. This fact can correlate to the retention of stative 1 in Southern Zapotec but its loss before consonants in the Sierra Juárez. While migration can lead to divergence it can also lead to convergence. For example, the *Pintura de San Andrés Mixtepec* dates the Cisyautepecan migration to the fifteenth century, a

fact which can be used to understand why Southern Zapotec languages that border Cisyautepecan have stative 2 while the non-adjacent Coatecan languages do not.

Both synchronic and diachronic future work could look at what suprasegmental features may accompany stative marking and differences between stative 1 vs. stative 2. Foreman and Lillehaugen (2017) mention the laryngealization of stative-marked forms in San Lucas Quiaviní and Uchihara (2021) attributes tonal changes in stative 2-marked Valley Zapotec words to the tonal attributes of the copula.

Here I proposed that innovations like stative 2, alienable *f*-, and the merger of *(t)t^j and *(t)ts before *i diffused during the Postclassic and Colonial periods among some varieties that had previously diverged. One wonders to what extent such inter-Zapotecan diffusion could take place today. The creation of the Mexican Republic and its history of hispanization policies have reduced interdialectal contact between Zapotecan languages and varieties. These policies have created widespread bilingualism and, coupled with societal discrimination, made people feel awkward about using Mesoamerican languages outside the intimacy of one's home or small town. In this situation Spanish becomes a lingua franca between speakers from different Zapotec communities who in the past would have communicated in Zapotec, accommodating differences, and thus being exposed to them and sometimes reproducing in their own speech innovations heard in other Zapotec towns.

Many of the discoveries presented in this paper came about by comparing lesserdocumented varieties of Zapotec to the published descriptions of better documented languages. Future advances in Zapotecan historical linguistics will depend on the extent to which lesser-studied and endangered Zapotecan languages will be documented. Appendix: Varieties mentioned, their location and classification The numbers in Map 1 can be used to identify the languages in Table 9, which shows their current genetic affiliation according to this author for Zapotec and according to E. Campbell (2013) and Sullivant (2016) for Chatino.

Genetic Classification			Language names	Varieties mentioned		
				1	Teojomulco	
				2	Zenzontepec	Santa Cruz
no	no			2	Chatino	Zenzontepec
		0		3	Tataltepec Chatino	Tataltepec de Valdés
hati	hati	atin		4	Eastern Chatino	
0	e C	Ch				
	Cor	stal				
		Coas				
		0				
				5	Soltec	San Miguel Sola
				6	Totomachapan	San Pedro
				7	Zapotec Covachilla	1 otomacnapan Santa María Lachivío
				/	Zapotec dialect	Santa Maria Lacinzio
					continuum	Santa Ciuz Mixtepec
						San Pedro el Alto
ec			ecan	8	San Vicente	San Vicente Coatlán
					Coatlán Zapotec	
apot			oat	9	Coatec Zapotec	San Baltazar I oxicha
Z		cec	0			San Danazar Loxicita
	otec	apot		10	Miahuatec	San Bartolomé
	te Zap	hern Za	atecan		Zapotec	Loxicha
						San Agustín Mixtepec
	ŭ	out	ahu			
		S	Mi			
				11	Yautepec Zapotec	San Bartolo Yautepec
					Amatec Zapotec	Coatecas Altas
						San Cristobal Amatlán

			00			13	Texmelucan	San Lorenzo
			Ipabuc				Zapotec	Texmelucan
						14	Zaniza Zapotec	Santa María Zaniza
			Зd			15	Elotepec Zapotec	
						16	Sierra Juárez	San Pablo
							Zapotec	Macuiltianguis
								San Juan Atepec
						17	Cajonos Zapotec	Villa Hidalgo Yalálag
								Yatzachi el Bajo
								San Jerónimo
								Zoochina
								San Bartolomé
								Zoogocho
						18	Rincón Zapotec	Tanetze de Zaragoza
							1	San Juan Yaée
		tec				19	Ayoquezco Zap.	Ayo. de Aldama
						20	Etla Zapotec	· · ·
		apc				21	Zimatlán Zapotec	S. Bernardo Mixtepec
		bán Za	otec			22	Mitla Zapotec	
						23	Albarradas Zap.	
		Al	apo	Sec		24	Quiatoni Zapotec	San Pedro Quiatoni
		nte	гZ	pot		25	Transyautepecan	Santo Domingo
		Mo	ilea	Zaj			Zapotec dialect	Petapa
		Z	Nuc	u			continuum	Santa María Petapa
			4	iste	ec			Guevea de Humboldt
				Ε	pot	26	Tlacolulita Zap.	Asunción Tlacolulita
					entral Zaj	27	Isthmus Zapotec	Juchitán de Zaragoza
						28	Cisyautepecan	Santa María
							Zapotec dialect	Quiegolani
					Ŭ		continuum	San Pedro Mixtepec
								Santiago Xanica
						29	Central Valley	Colonial Valley
							Zapotec dialect	Zapotec (CVZ)
							continuum	Santa Ana del Valle
								San Pablo Güilá
								San Lucas Quiaviní
								Teotitlán del Valle
								Santo Tomás Jalieza
								Asunción Ocotlán

 Table 9: Genetic affiliation of varieties mentioned in the text

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