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Tilquiapan Zapotec is an Otomanguean language spoken in the town of San Miguel Tilquiapan, in the Oaxaca Valley, in the central part of that state, in southern Mexico (see Merrill 2005). There are about 2700 speakers according to the government census (INEGI 2000), though town authorities (p.c. 2004) suggest that about 7000 is a more accurate assessment of the population. The Zapotec language spoken in Tilquiapan is distinct from that of any other town, although nearby Santa Inez Yatzeche has 80–90% intelligibility with Tilquiapan, according to recorded text testing (Weathers 1973, Persons et al. 1985). With respect to sociolinguistics and language attitudes, speakers in Santa Inez and Tilquiapan recognize the close relationship, though people from each town tend to say that those from the other ‘talk funny’.

There is an extensive repertoire of works about Zapotec languages in general (from de Cordoba 1578 and Belmar 1891 up to López Cruz 2006; see Merrill’s (2008) 1600-item bibliography) and about Valley Zapotec in particular (*ibid.*), especially recently. However, each variant is significantly different. Like other Zapotec languages, Tilquiapan Zapotec has VSO word order principally and is primarily head-initial (though quantitative and interrogative adjectives precede the noun). Verbs may have up to seven morphemes, and possession is the most productive morphology on nouns. Pronoun enclitics occur with both nouns and verbs.

The orthography given here was developed in consultation with speakers over the years 2000–2008. The speaker in the recording is Profeta Chávez Vásquez, a 29-year-old woman. She based her retelling of the tale of the North Wind and the Sun on a brief story line I gave her in Spanish and a set of seven pictures which were developed by Fred Adlao in order to elicit a more natural rendering. The recordings of most of the words illustrating the phones are also her voice. The words illustrating contrast are here pronounced in isolation, but are found occurring in naturally recorded texts. The equipment used was a headset with a boom mike and a Toshiba computer; the software used was Cool Edit 2000 or Audacity, the file format is .wav, and the sample rate is 44100, the resolution 16-bit, and the channel mono.

### Consonants

The affricates are each a single segment. In the chart below, the slash ‘/’ followed by a symbol in bold indicates a lenis/fortis distinction, otherwise realized as a voicing distinction in obstruents.

	Bilabial	Dental	Alveolar	Post-alveolar	(Alveolo-)palatal	Velar	Labialized velar
Plosive	p b	t d				k g	k <sup>w</sup> g <sup>w</sup>
Nasal	m		n / n̥				
Flap			r				
Affricate				tʃ dʒ			
Fricative			s z	ʃ ʒ			
Approximant					j		
Lateral approximant				l / l̥			

Note: Every word-final lenis n is pronounced ŋ.

CONSONANT	TRANSCRIPTION	ORTHOGRAPHY	GLOSS
p	pan	<i>pan</i>	bread
b	baɫd	<i>bald</i>	few
t	tant	<i>tant</i>	so much
d	dan	<i>dan</i>	countryside
k	kana	<i>canza</i>	walking
k <sup>w</sup>	k <sup>w</sup> an	<i>cuan</i>	alfalfa
g	gan	<i>gan</i>	will be able
g <sup>w</sup>	g <sup>w</sup> anaz	<i>guanaz</i>	went to grab
r	ran	<i>ran</i>	to see
tʃ	tʃane	<i>chane</i>	will go with
dʒ	dʒan	<i>dxan</i>	god
ʃ	ʃana	<i>xana</i>	how?
ʒ	ʒan	<i>llan</i>	anger
m	man	<i>man</i>	animal
n	nani <sup>ʔ</sup> i	<i>nani</i>	lady
j	jan	<i>yan</i>	neck
l	lan	<i>lan</i>	soot

The primary consonant distinction in Zapotec languages has long been held to be fortis/lenis rather than voiced/voiceless (see Nellis & Hollenbach 1980; for a more recent exposition, see Avelino 2001). For many consonants, voicing is a phonetic correlate of the fortis/lenis distinction. However, in Tilquiapan Zapotec, there is a fortis /n/ (not represented in the orthography) which occurs infrequently, in words such as *xten* ‘belong to’ and *nai* ‘yesterday’. It is a little longer than its lenis counterpart. The fortis counterpart of /l/ is /ɫ/, which functions as a segment (as can be seen from consonant cluster distribution); this relation is readily demonstrable especially in the causative in verbs, which is sometimes formed by changing the fortis/lenis value of the root-initial consonant (i.e., [bla<sup>2</sup>a] ‘get loose’, [bɫda<sup>2</sup>a] ‘let loose, set free’).

Furthermore, Tilquiapan Zapotec has a tendency towards devoicing word-finally. However, speakers can hear the difference, for example, between a somewhat devoiced [z] and a [s], though it sounds very similar to others.

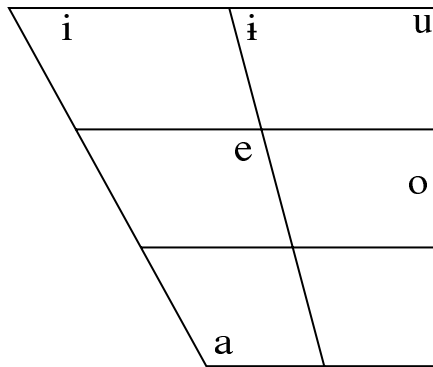
The consonant distribution also indicates the segmental status of /k<sup>w</sup>/ and /g<sup>w</sup>/. The coda of a syllable cannot include two consonants, so words like *begw* ‘comb’ and *beecw* ‘dog’ indicate that those sequences are single segments. Also, only two consonants can occur in the onset, so words like *gwziu* ‘thunder’ and *gwxar* ‘grasshopper’ and *cweu* ‘large rodent’ confirm that analysis. Also, word-initially there is free variation for both [g] and [g<sup>w</sup>]. Depending on the individual speaker and on the degree of carefulness of speech (fast speech/slow speech), the /g<sup>w</sup>/ can be pronounced anywhere from [g<sup>w</sup>] to [ɣ<sup>w</sup>] to simply [w]. The [g] alternates with [ɣ] also.

Fricative allophones of /b/ and /d/ occur intervocalically and elsewhere as in Spanish, and every word-final lenis /n/ is pronounced [ŋ]. When two instances of /r/ occur at morpheme boundaries (such as *r-ree* ‘habitual-go out’), the resultant pronunciation is a trill as in Spanish. When /r/ occurs before any other consonant, it is pronounced as an approximant, like the [ɹ] in English.

Tilquiapan Zapotec has an abundance of fricatives and affricates. The /ʃ/ and /ʒ/ have allophones [ʂ] and [ʐ] which are retroflex and further back. There is only one clear example of contrast in the postalveolar/alveopalatal retroflex fricative pair of [ʂ] and [ʐ]: [ʂan], meaning ‘anger’, and [ʐan], meaning ‘bottom, beneath’. Generally only [ʂ] and [ʐ] occur before [a] and [u], and only [ʃ] and [ʒ] occur before [i]. According to a native speaker trained in phonetics, in the environment before the central vowel *i* an intermediate form occurs, a little further back than [ʃ] and a bit further forward than [ʂ].

Consonants apparently not native to Zapotec but used in loan words from Spanish include [f] and [x], among others, in words such as *cafe* ‘coffee’ and *mejor* [mexor] ‘better’.

## Vowels



VOWEL	TRANSCRIPTION	ORTHOGRAPHY	GLOSS
i	diza	<i>diza</i>	Zapotec
	ni	<i>ni</i>	that
	tʃi	<i>chi</i>	when
i	rɔi	<i>rɔi</i>	pass
	ni	<i>ni</i>	be sour
	...		
u	gdu	<i>gdu</i>	all
	nu <sup>2</sup> u	<i>nuu</i>	exist
	tʃu <sup>2</sup> u	<i>chuu</i>	will exist
e	de	<i>de</i>	dust
	ne	<i>ne</i>	and
	tʃe <sup>2</sup> e	<i>chee</i>	go!
o	do	<i>do</i>	corn tassel
	...		
	tʃo <sup>2</sup> onu <sup>2</sup> u	<i>choonuu</i>	let's go!
a	da	<i>da</i>	come!
	na	<i>na</i>	now
	tʃa <sup>2</sup> a	<i>chaa</i>	I will go

Many Zapotec languages have six vowels. (Sequences  $\widehat{t}j\bar{i}$  and /no/ have not been attested, which is indicated by ‘...’ in the list of vowel examples.) Different variants may have different sounds for the sixth vowel. In Tilquiapan, the sixth vowel is the high central /i/. The /e/ has a mid central allophone used in many contexts; the front allophone usually only occurs after /i/, and is somewhat lower than a prototypical [e]. However, for typology reasons, I analyze this vowel as an /e/. The quality of the [a] shifts slightly, assimilating a bit to the place of the consonants in the environment: it is further back after the four velar consonants (and also especially before word-final lenis /n/, which is phonetically realized as [ŋ]). The /o/ is of relatively infrequent occurrence, except for the common morpheme *lo*, which means ‘face’ and is also used with prepositional functions.

Glottalization is phonemic on the syllable nucleus (notable for reduction related to stress, see below), and is treated as a vowel feature. It occurs on all six vowels, both with and without echo, which is not contrastive, but is in free variation, on a continuum from none to slight to full, varying between speakers and degree of carefulness of speech. Glottalization on the vowel alternatively manifests as laryngealization (creaky voice) in a few specific cases. Vowel length appears to be inherent to the form of a word in some instances, and sometimes derived through specific processes, probably based on tone contours and syllable structure and weight. Long vowels occur contrastively with both contour (two) tones and steady tone (possibly two occurrences of the same tone). Word-final unstressed vowels usually devoice (orthographically, the devoiced /u/ is written as a <w>). Clitic pronouns usually do not affect whether such a vowel devoices.

## Prosodic features

Tone is phonemic and contrastive in Tilquiapan Zapotec and cannot be entirely predictable by phonation as has been suggested for some other Zapotec languages (cf. Munro et al. 1999: 3); there are many absolute minimal pairs, even in modal voice (see below, for a few examples). Tone varies independently of glottalization. Phonetically and phonemically there seem to be simply two tones, low and high; there are no minimal triples. Phonetically, there are only two measurable tones, though high occasionally occurs as very high, and low occasionally occurs as very low. Falling and rising contours occur. I analyze tone contours as sequences of tones because they do not occur on simple vowels. (If a contour tone were a single tone, it would naturally be expected to occur on all types of vowel nuclei, including simple ones, without restrictions, just as other tones.) Note that tone pairs occur whether the vowel is simple (as in *beld* ‘sister’, ‘fish’), long (as in *llily* ‘cotton’, ‘sheep’), or glottalized (as in *naald* ‘be thick’, ‘be slow’).

According to a native speaker, the mental tonemic representation involves three basic levels: low, mid, and high. Low and high are salient, and mid is everything else (though high tone is perceptually more marked for the speakers than low tone).

Perhaps what they perceive as a mid tone, is actually a phonemically underspecified tone, that they perceive as not having tonal salience. This syllabic nucleus with underspecified tone is then realized as one of the two phonemic tones, low or high, according to the environment, depending on whether assimilation or obligatory contour comes into effect. The occasional very high and very low tones could also be accounted for as a result of obligatory contour (cf. Obligatory Contour Principle as defined in Leben 1973; Goldsmith 1976; McCarthy 1979, 1981, 1986; Yip 1988; and others).

Some minimal tone pairs appear to share a semantic relationship. The term for ‘sheep’ (*llily*) seems to be derived from ‘cotton’ (*llily*). The flesh of the white nopal cactus (*biaxtily*) was used for soap, before the Spaniards introduced lye soap (*biaxtily*). Additionally, ‘be slow’ (*naald*) and ‘be thick’ (*naald*) may be related; likewise the pairs of ‘grass’ and ‘alfalfa’ (*cuam*), ‘steam’ and ‘sky’ (*guba*), ‘here’ and ‘there’ (*ri*), and ‘trap’ and ‘grab’ (*rmaz*) each have the same structure on the consonantal/vocalic tier, but different tones. (For more detail on tones in Zapotec languages, see the references on tone: de Angulo 1926; Pike 1948; Leal 1950;

Marks 1976; Mock 1983; Bickmore & Broadwell 1992, 1998; Beam de Azcona 1998; Benton 2003; Broadwell & Zhang 2004; Nelson 2004; López Cruz 2006)

	TONE	TRANSCRIPTION	ORTHOGRAPHY	GLOSS
Simple	High	bēd̃	<i>beld</i>	sister (of fem.)
	Low	bēd̃	<i>beld</i>	fish
	2nd syllable			
	High	biaʃtili	<i>biactily</i>	soap
Long	Low	biaʃtili	<i>biactily</i>	white prickly pear
	High	zi:li	<i>llily</i>	cotton
Glottalized	Low	zi:li	<i>llily</i>	sheep
	High	naʔaḷd̃	<i>naáld</i>	be slow (speed)
	Low	naʔaḷd̃	<i>naald</i>	be thick (liquid)

Stress usually falls on the final root syllable, but sometimes on the penultimate root syllable. Glottalized vowels only occur in the stressed syllable. There are very few words which maintain complexity – either glottalization or length – as a vowel feature in more than one syllable, including compound words.

Also, phrasal stress can come into play, and a noun may lose its complex vowel when a dependent demonstrative or adjective follows (cf. Black 1995). Some dependent adjectives and demonstratives become the stressed syllable of the word, causing the nominal to lose its length or glottalization. Some examples are *dxaap* ‘girl’ > *dxapii* ‘young girl’; also *rni* (orthographic accent here indicating length) ‘speak’ > *rnizaac* ‘speak well of’ – the vowel shortens to a simple *i* after adding the complex dependent adjective *-zaac* ‘good’; the word meaning ‘word’, *diix* (accent for length) goes through the same process and becomes simply *dizaac* ‘good news’.

High tone seems to occur primarily on stressed syllables, though it seems that the tone, being so salient to speakers, draws the stress, rather than otherwise.

## Transcription

Note that the theme of this story is a little unnatural in Tilquiapan Zapotec – culturally the participant involved in stories with the Sun is usually the Moon, not the Wind. Given that this is a common text for use in this series, I showed the speaker a set of seven pictures depicting the events and told her a basic plot line in Spanish to elicit the text which she then produced, as mentioned above.

In this story all sequences of *dʒ* and *tʃ* and *ld* are always single segments, therefore they are not explicitly marked as such. The double slash in the transcription generally corresponds to the periods in the translation, and the single slash corresponds to the commas.

tu dʒi gu bi kun dʒang<sup>w</sup>bidʒ tu pweʃt donu tʃunde na mexorru de  
 lo gropran// bi rapi lo dʒang<sup>w</sup>bidʒ/ joʃo tʃo<sup>ʔ</sup>on tu pweʃt donu  
 tʃunde na mexor gu li<sup>ʔ</sup>i gu la<sup>ʔ</sup>ana// jo<sup>ʔ</sup>o/ rapy dʒang<sup>w</sup>bidʒ//  
 ni<sup>ʔ</sup>itirak tʃigunran zied tu dadi<sup>ʔ</sup>i nak<sup>w</sup>ba tu ʃtʃamar/ tʃi<sup>ʔ</sup>i rapi  
 bi lo dʒang<sup>w</sup>bidʒ/ ni gun gan k<sup>w</sup>ee ʃtʃamar dadi<sup>ʔ</sup>i<sup>ʔ</sup>ri niʃi na  
 mexorru niʃi na ni gun gan// jo/ rapi dʒang<sup>w</sup>bidʒ// tal lii zi<sup>ʔ</sup>iza  
 rni tʃi zīgak// tʃilueg<sup>w</sup>do bsan dʒang<sup>w</sup>bidʒ/ gubigbi nez rot zied

dadi<sup>2</sup>i<sup>2</sup>qui// tʃi<sup>2</sup>i<sup>2</sup> bzulo bi kaldubi/ juertduf kaldubi nez rot  
 zied dadi<sup>2</sup>i<sup>2</sup>ki// ne dadi<sup>2</sup>i<sup>2</sup>ki lugardi niunbi gan niabe<sup>2</sup>e ʃtʃamarba/  
 na gubinba na<sup>2</sup>ald/ tʃi<sup>2</sup>i<sup>2</sup> dʒi<sup>2</sup>itʃrubiuba la<sup>2</sup>an ʃtʃamarba// bzulo  
 kaldubi juertduf per adbindiba gan niere<sup>2</sup>en// gunsı bi ziβi/  
 ri<sup>2</sup>i<sup>2</sup>ti blezbi tʃi gubigrıbi lo dʒang<sup>w</sup>bidz// tʃi<sup>2</sup>i<sup>2</sup> rapi bi lo  
 dʒangubidz/ bindia gan nie<sup>2</sup>e ʃtʃamarba// rapi dʒang<sup>w</sup>bidz/ tʃi<sup>2</sup>i<sup>2</sup>  
 naga<sup>2</sup>a// na<sup>2</sup>aga<sup>2</sup>aya<sup>2</sup>a runtukara na<sup>2</sup>a// jo:/ rapi bi// tʃi<sup>2</sup>i<sup>2</sup> lueg<sup>w</sup>do  
 gubig dʒang<sup>w</sup>bidz// zikni gubig dʒang<sup>w</sup>bidz/ tʃi bzulo dʒang<sup>w</sup>bidz  
 karenalda<sup>2</sup>a lo dʒang<sup>w</sup>bidz// nalda<sup>2</sup>aruduf kare<sup>2</sup>e lo dʒang<sup>w</sup>bidz/ tʃi  
 bzulo dadi<sup>2</sup>i<sup>2</sup> karinbaga nalda<sup>2</sup>a aʃta ja lo ju rieb nis raknaiba  
 tant ga nalda<sup>2</sup>a rinba// tʃi gukbeba zi<sup>2</sup>i/ tʃi<sup>2</sup>i<sup>2</sup> lueg<sup>w</sup>do ble<sup>2</sup>eba  
 ʃtʃamarba nu<sup>2</sup>u naba// tʃi<sup>2</sup>i<sup>2</sup>pa rcuasa dʒang<sup>w</sup>bidz/ gubigrı  
 dʒang<sup>w</sup>bidz lo bi/ tʃi<sup>2</sup>i<sup>2</sup> rapi dʒang<sup>w</sup>bidz lo bi/ guntiu bi/ naa  
 binia gan lo// a:h/ rapi bi/ guldiku li<sup>2</sup>i lagı lua.

### Orthographic version

Tu dxi gu bi cun dxangubidx tu puext, donu chunde na mejorru de lo gropran. Bi rapy lo dxangubidx, ‘Yoo choon tu puext donu chunde na mejor gu lıi gu laana.’ ‘Yoo,’ rapy dxangubidx. Niitirac chigunran zied tu dadii nacwba tu xchamar, chii rapy bi lo dxangubidx, ‘Ni gun gan cuee xchamar dadiiri nii na mejorru nii na ni gun gan’. ‘Yo,’ rapy dxangubidx. ‘Tal lıi zııza rniu chi zigac.’ Chiluegwdo bsan dxangubidx, gubigbi nez rot zied dadiiqui. Chii bzulo bi caldubi, juertdux caldubi nez rot zied dadiiqui. Ne dadiiqui lugardi niunbi gan niabee xchamarba, na gubinba naald, chii dxiichrubiuba laan xchamarba. Bzulo caldubi juertdux per adbindiba gan niereen. Gunsı bi zıi, riiti blezbi chi gubigrıbi lo dxangubidx. Chii rapy bi lo dxangubidx, ‘Bindia gan niee xchamarba’. Rapy dxangubidx, ‘Chii nagaa. Naagaayaa runtucara naa’. ‘Yo,’ rapy bi. Chii luegwdo gubig dxangubidx. Zicni gubig dxangubidx, chi bzulo dxangubidx carenaldaa lo dxangubidx. Naldaarudux caree lo dxangubidx, chi bzulo dadii carinbaga naldaa axta ya lo yu rieb nis racnaiba tant ga naldaa rinba. Chi gucbeba zıi, chii luegwdo bleeba xchamarba nuu naba. Chiipa rcuasa dxangubidx, gubigrı dxangubidx lo bi, chii rapy dxangubidx lo bi, ‘Guntiu, bi, naa binia gan ló.’ ‘Aah,’ rapy bi, ‘guldıcu lıi lagui lua.’

### Translation

One day the sun and wind made a bet, to see who was the best of the two. The wind said to the sun, ‘Let’s make a bet to see who is better, you or me.’ ‘OK,’ said the sun. Just then it happened that they saw a man who came by wearing a

jacket, and so the wind said to the sun: ‘Whoever can make the man take off his jacket will be the best and will win.’ ‘OK,’ said the sun, ‘just as you say’. So immediately the wind left and moved up to where the man was. Then the wind began to blow really hard where the man was. And the man, instead of taking off his jacket, he felt cold, so cold that he shivered in his jacket. The wind began to blow really hard, but he couldn’t make the man take off his jacket. When he saw this, then he gave up and went back to the sun. He said to the sun, ‘I couldn’t make him take off his jacket.’ The sun said, ‘Then now it’s MY turn.’ ‘OK,’ said the wind. So the sun moved up, and when he’d moved up close to the man, the sun began to heat up. So very hot as the sun got, the man began to feel so hot that his sweat fell to the ground. When he realized this, then immediately he took off the jacket he had on. So the sun laughed and laughed, he returned to the wind, and said to the wind, ‘See, wind, I beat you.’ ‘Yes,’ said the wind, ‘it’s true that you are more important than me.’

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