

## Multiple functions, multiple techniques: The role of methodology in a study of Zapotec determiners<sup>1</sup>

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Field linguists use a combination of techniques to compile a grammatical description, starting with various types of targeted elicitation and followed by the study of more natural speech in the form of recorded texts. These usual techniques were employed in my work on Teotitlán del Valle Zapotec, an Oto-Manguean language spoken in Mexico, but in an unusual order, with texts, mainly folk tales and life histories told by community elders, being collected and analyzed first due to the priorities of the documentation project I was a part of. This paper examines the role that methodology played in the investigation into one small area of the grammar, a set of noun phrase-final determiner clitics. These clitics make both spatial and temporal distinctions, raising theoretical questions regarding the role of a temporal marker in the NP. At the same time, it brought to light some interesting issues surrounding methodology in fieldwork: how does the method of collection affect the type of data gathered, and does the order in which different methodologies are employed affect the final outcome?

**1. INTRODUCTION.** While transcribing and translating Teotitlán del Valle Zapotec texts as part of a documentation project, one of the initial puzzles I encountered was a set of noun phrase-final clitics for which the interpretations of native speaker consultants varied widely. Further investigation, consisting of targeted elicitation and comparison with related dialects, revealed the clitics to be determiners which make both spatial and temporal distinctions, and which have important discourse functions. This investigation raised theoretical questions regarding the role of a temporal marker in the NP. At the same time, it brought to light some interesting issues surrounding methodology in fieldwork: how does the method of collection affect the type of data gathered, and does the order in which different methodologies are employed affect the final outcome?

**2. LANGUAGE BACKGROUND AND METHODOLOGY.** Teotitlán del Valle Zapotec (TdVZ) is a largely undocumented variety of Central Zapotec (Zapotecan, Otomanguean) spoken in Teotitlán del Valle, a town located in the Tlacolula branch of the Central Valley

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System of Oaxaca State, Mexico. The 2005 census reports a population of about 5600 people, about two-thirds of whom are reported to be “speakers of some indigenous language” (INEGI 2005).<sup>2</sup> Smith Stark (2003) classifies TdVZ as one of the dialects that make up the group Western Tlacolula Zapotec, identified by the code ‘zab’ in the Ethnologue (Gordon 2005). Recent work on other Western Tlacolula Zapotec dialects includes Munro & Lopez (1999) and Lillehaugen (2006). TdVZ is an endangered language, but some children are learning it as a first language and there is community interest in language preservation and revitalization.

My work on TdVZ began in 2004 with my participation in the Teotitlán del Valle Community Language Archive Project, a collaboration between San Francisco State University and the Community Museum of Teotitlán del Valle under the direction of Professor Troi Carleton. Because the main interest of the museum committee was the creation of an archive of oral histories and local folklore told by elders, work on text collection, transcription and translation began almost immediately, after a basic phonemic inventory had been established but before substantial work had been done on the grammar of the language. A small amount of elicitation of word lists and paradigms was done along with the collection of texts during the initial stages, but the bulk of my elicitation and grammatical analysis was carried out during my fieldwork in Teotitlán del Valle in the summer of 2007.<sup>3</sup>

Field linguists generally use a combination of targeted elicitation and texts to compile a grammatical description, with texts providing more naturally occurring forms free from the biases of the elicitation situation, and with elicitation being useful for providing full paradigms along with native speaker grammaticality judgments (Mithun 2001, Chelliah 2001). In my investigation of the semantics of the TdVZ determiner clitics, both elicitation and the analysis of texts have played vital roles. The texts, which owing to the circumstances of my work in Teotitlán del Valle were collected and transcribed in the early stages of the research, revealed the temporal and discourse functions of the determiners. Elicitation, which was informed by the analysis of the texts, brought out the expected spatial distinctions and enabled me to refine my analysis of the temporal extensions of the determiners. Neither method on its own would have provided a complete picture, and it is possible that the ‘backwards’ order of data collection allowed for a better insight into how speakers actually used and thought about the system of determiners. Had I known going into the text transcription that =*ki* is ‘simply’ the distal determiner, I may have glossed it as such and moved on without having the interesting discussions with consultants that prompted the investigation. Thus native speaker intuitions, obtained during elicitation and translation of the texts, also play an important role in my analysis.

In most cases Spanish was the contact language used for elicitation and text translation, and the glosses were subsequently translated into English; I have included both the original Spanish and the English free translations in my examples. For examples from the

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<sup>2</sup> Almost all of them would be speakers of TdVZ; there are no significant numbers of speakers of any other indigenous language in the town. I have heard of a few speakers of other Zapotec languages who moved to the town as adults.

<sup>3</sup> 2007 fieldwork funded by UC Berkeley Graduate Division Summer Research Grant.

few elicitation sessions conducted in English, I have only included the English free translation. There is a great deal of speaker variation in the use of tone and phonation types in TdVZ, and these have yet to be fully analyzed. I have marked the low/creaky vowel on the proximal determiner with the grave accent, as used in the practical orthography. Otherwise, tone is not marked in the examples.<sup>4</sup> Glottalized vowels are marked with an apostrophe. The consultants who made this research possible are Lorenzo Gutiérrez Lopez (LGL), Serafin Martinez Gonzales (SMG), Samuel Bautista Lazo (SML), Lucia Lazaro Vasquez (LLV), Viridiana Chavez (VC), Andrés Lazaro Bautista (ALB), and Maria Mendoza Contreras (MMC).

**3. TDVZ DETERMINER CLITICS: DISTRIBUTION AND FUNCTION.** Like several other Zapotec languages, Teotitlan del Valle Zapotec (TdVZ) has a set of determiners that make rather fine distinctions regarding the spatial relationship between the speaker and the referent. TdVZ has four such determiners, which appear as clitics at the end of the noun phrase; these are shown in Table 1 along with their approximate English and Spanish equivalents.

TABLE 1. TdVZ determiner clitics

	TdV Zapotec	Spanish	English
proximal (PROX)	<i>rè /rè<sup>L</sup>/</i>	‘este’	‘this’
medial (MED)	<i>kang /kaŋ/</i>	‘ese’	‘that’
distal (DIST)	<i>re /re<sup>H</sup>/</i>	‘ese/aquel’	‘that’
distal/invisible (INVIS)	<i>ki /ki/</i>	‘aquel (ausente)’	‘yon (invisible)’

This set of NP-final clitics acts as definite determiners and also indicates the spatial relation between the object denoted by the NP and the speaker; their function overlaps the categories of definite article and demonstrative adjective in English and Spanish. In addition to their deictic spatial reference, these clitics have developed a temporal sense, with the non-visible determiner =*ki* functioning as a past tense marker and contrasting with the present tense sense of the other three. Although it is relatively common for spatial demonstratives to expand into the temporal domain (Givón 2001), in a language like TdVZ where the aspectual prefix on the verb does not necessarily give any indication of the time of the occurrence of the event relative to the time of the utterance, the addition of a tense-like determiner means that the NP carries additional temporal information not encoded in the verb.

Consultants varied widely in their glosses for the enclitics when providing translations for the text, some translating them as corresponding to the Spanish demonstrative adjective or definite article, others calling them discourse markers that have no Spanish translations,

<sup>4</sup> De Angulo (1926) and Lowes & Lopez Cruz (2007) discuss the use of tone in TdVZ verbal morphology.

and most attributing some sort of ‘past tense’ meaning to the distal =*ki*. =*ki* was by far the most commonly used of the determiners in the texts I collected, which were folktales, local legends, and personal narratives set in the distant past.

As the following examples show, the determiners appear in NP-final position, attaching directly to the noun they modify (1), following other nominal modifiers (2), or at the end of a relative clause (3). For phonological reasons, I analyze them as clitics; they are always unstressed and seem to form a single unit with the word to which they attach.

- (1) (SMG, elicited)<sup>5</sup>

*gu-læɛbi nis=rè*  
 COMPL-boil water=PROX  
 ‘his water was boiled’  
 [<sub>NP</sub>[<sub>N</sub>nis] =rè]

- (2) (SMG, elicited)

*gu-daaw-a’ naraʒ laa=rè*  
 COMPL-eat-1s orange bitter=PROX  
 ‘comí mi naranja amarga’  
 ‘I ate my bitter orange’

- (3) (LGL, text: *Pobreza*)

*per betsa-n ni zuwa’a sru’u=ki ri-dʒiet[-an]*  
 but brother-3s REL HAB.sit well=INVIS HAB-be.angry-3s  
 ‘pero su hermano, el que vive bien, se enoja’  
 ‘but his brother, the one who lived well, got angry’  
 [<sub>NP</sub> [<sub>RelP</sub> ni zuwa’a sru’u] =ki]

The determiners are used with definite referents, and are in complimentary distribution with the indefinite article *te*, which occurs in prenominal position. *Te* is usually used when a referent is first introduced into the discourse, and the determiner enclitics are used in subsequent references, as illustrated in (4).

<sup>5</sup> Abbreviations used: 1s=‘first person singular’; 1p=‘first person plural’; 2s=‘second person singular’; 3s=‘third person singular’; 3s.ANI=‘third singular, animal’; 3s.INAN=‘third singular, inanimate’; 3s.OBJ=‘third singular object’; 3p=‘third person plural’; COMPL=‘completive aspect’; COP=‘copula’; DIST=‘distal determiner’; FUT=‘future aspect’; HAB=‘habitual aspect’; INT=‘intensifier’; INVIS=‘distal/non-visible determiner’; MED=‘medial determiner’; NEG=‘negative/negation’; NMLZ=‘nominalizer’; POT=‘potential aspect’; PL=‘plural’; POSS=‘possessive’; PROG=‘progressive aspect’; PROX=‘proximal determiner’; PST=‘past’; REL=‘relative pronoun’; TAM=‘Tense-Aspect-Mood’; TdVZ=Teotitlán del Valle Zapotec; TT=topic time; TU=time of utterance; TSit=situation time.

- (4) (LGL, text: “El Tecolote y la Culebra”)

*tʃi bi-enela'aw-an zit<sup>h</sup> ra-shia-teè te maiŋ aʃ ri-nien*  
 when COMPL-see-3S far HAB-jump-INT a animal and HAB-say-3S

‘Cuando vio lejos un animal brincaba y decía’

‘When he saw in the distance an animal jumping, and said,’

*tutu maiŋ=re ra-shia lo ne:z*  
 what animal=DIST HAB-jump face road

“¿que animal será el que brinca en el camino?”

“what animal could that be jumping in the road?”

*aʃ yu-zlo ka-ʃibi-an aʃ neŋ trakwe'edio tu*  
 and COMPL-begin PROG-be.afraid-3S and say.3S who.knows what

‘y empezó a tener miedo y dijo “¿quien sabe que’

‘and he began to be afraid, and said, “Who knows what’

*maiŋ=kaj neŋ aʃ yu-zlo ka-za'-aŋ*  
 animal=MED say.3S and COMPL-begin PROG-walk-3S

‘animal es?’” dijo y empezó a caminar.’

‘animal that is’, and he began to walk.’

*tʃi bi-tsuin'-aŋ yut ra-shia maiŋ=ki tʃi*  
 when COMPL-arrive-3S where HAB-jump animal=INVIS when

‘Cuando llegó donde brincaba aquel animal,’

‘When he arrived where that animal was jumping,’

*yu-n-aŋ te damen kon te bel bel=ki*  
 COMPL-see-3S a owl with a snake snake=INVIS

‘cuando vio era un tecolote y una culebra. Ese culebra’

‘he saw that it was an owl and a snake. The snake’

*a-bi-del-teè-m le'en ʃilḡ dam=ki*  
 already-COMPL-tangled.up-int-3S.ANI inside wings owl=INVIS

*a-ba'-an'-um yan*  
 already-COMPL-do-3S.ANI win

‘ya enredó dentro de las alas del tecolote, ya ganó.’

‘had tangled itself up inside the wings of the owl, he had already won.’

The enclitics are rarely used directly with inherently definite NPs, such as proper names and pronouns, or with generic or mass nouns (as in (5)). They generally do not occur following possessed nouns, unless the speaker needs to disambiguate. However, they

do often occur with relative clauses that contain inherently definite NPs, as in (6); in this case I analyze the determiner as modifying the relative pronoun *ni*.

- (5) (LGL, text: *La Bruja Sacó a Erasto*)

*jonum bi-dε'un nopi per bε'-εt tʃiku*  
 three COMPL-drink-1P **mezcal** but COMPL-come **Francisco**

‘Los tres tomamos mezcal y vino Francisco,’

‘The three of us were drinking mezcal and Francisco,’

*duʃ-kunad-uŋ kon dunoj*

POSS-bro.in.law-1P with 1P

‘nuestro cuñado.’

‘our brother-in-law, came.’

- (6) (LLV, text: *Historia de Pancho Villa*)

*per ni la da ziku=ki yu-ti-aj*  
 but REL named Don.Ziku=INVIS COMPL-die-3S

‘Pero el que se llama Don Ziku se murió.’

‘But the one called Don Ziku died.’

They can also occur after the head of a relative clause, and in some cases, in both positions:

- (7) (SMG, elicited)

a. *gu-rap-u' δ-tap libr=ki ni gu-ni-ε*  
 COMPL-have-2S PL-four book=INVIS REL COMPL-say-1S

*lui (nai)*

you (yesterday)

‘¿Tienes los cuatro libros que te pedí (ayer)?’

‘Do you have the four books I asked you for yesterday?’

b. *gu-rap-u' δ-tap libr=ki ni gu-ni-ε lui=ki*  
 COMPL-have-2S PL-four book=INVIS REL COMPL-say-1S you=INVIS

‘¿Tienes los cuatro libros que te pedí?’

‘Do you have the four books I asked you for?’

The use of =*ki* in both positions in (7b) adds an emphatic sense. According to SMG, this wording implies that the speaker has already asked for the books many times and so is emphasizing both the books and the asking.

The proximal and distal determiners, =*rè* and =*re*, are distinguished by tone and phonation type, and are homophonous with the independent words meaning ‘here’ and ‘there’, respectively. =*re/re* are marked by high tone, while =*rè/rè* have low tone and creaky voice

phonation.<sup>6</sup> The two sets are obviously closely related semantically; they are distinguished by the environment in which they occur, but there are some cases of ambiguity. The two types can co-occur in the same sentence:

(8) (SMG, elicited)

<i>tu</i>	<i>ð-beni</i>	<i>ngiu</i>	<i>ni</i>	<i>na</i>	<i>tjop=re</i>	<i>zu</i>	<i>re</i>
who	PL-person	man	REL	COP	TWO=DIST	HAB.stand	there

‘¿Quienes son los dos hombres allá?’  
 ‘Who are those two men over there?’

In addition, there are independent demonstrative pronouns, *ndè* ‘this (*este*)’ and *dè* ‘that (*ese*)’. There are also at least two related independent words with anaphoric discourse reference: *reki* ‘there, that place (formerly specified)’ and *zeki* ‘that way/manner (previously elaborated in the discourse)’.

Other Central Zapotec languages also have complex systems of determiners that make fine distinctions in spatial reference. Isthmus Zapotec has the four-way system /ri/ ‘this (*este*)’, /ka/ ‘that (*ese*)’, /rika/ ‘that (*aquel*)’, /ke/ ‘yon, invisible (*aquel ausente*)’ (Pickett & Black 1998). The San Lucas Quiavini Zapotec Dictionary (Munro & Lopez 1999) lists the independent demonstrative adjectives *re’nn*, *rèe*, *rèe*, *rèenn*, and the demonstrative clitics =*ag* ‘PROX’ and =*ih* ‘DIST’. The demonstrative adjectives in both of these languages appear in the same position as those in TdVZ, and the distal /ke/ in Isthmus Zapotec is used as a temporal marker in the same fashion as its TdVZ cognate =*ki*.

**4. ESTABLISHING A SPATIAL SENSE: ELICITATION.** In my initial analysis of the texts, there was no indication that these determiner clitics had any spatial reference. Their function in the texts seemed to correlate with the majority of the native speaker intuitions, that they were either temporal or discourse markers: =*ki* always occurred with the description of past events, and the fact that a determiner sometimes failed to appear in the expected environment indicated a possible discourse-level function. Only one consultant gave any indication of a spatial meaning: LGL said that “=*ki* is further away [than =*re*] in time and space,” and he also used the Spanish determiners *ese* and *aquel* in his glosses. Because it is common cross-linguistically and within the Zapotec family for determiners to make a spatial distinction, I expected to find that these determiners would also have a spatial sense, and indeed when eliciting phrases with prompts that made spatial distinctions, consultants used the determiner clitics in a very consistent manner. I assume the spatial reference to be the primary sense, as the TdVZ demonstrative determiners have cognates with spatial reference in other Zapotec languages, and also because this type of semantic shift is common, as noted above.

<sup>6</sup> With some speakers, the vowel in the proximal expressions is longer; they have the pairs *-reè/reè* versus *-re/re*. One consultant, LGL, also distinguishes the two sets by vowel quality. He pronounces the determiners /ra<sup>H</sup>/ and /ra<sup>L</sup>/, and uses the standard vowel quality for the locative adverbial expressions equivalent to English ‘here’ and ‘there’. To avoid confusion, I use the transcription for the more ‘standard’ pronunciations of the determiners throughout this paper.

The minimal triplet in (9) illustrates the three-way deictic spatial distinction:

- (9) (SBL, elicited)
- a. *yuro 'o-teè daiŋ=rè*  
 big-INT hill=PROX  
 'Este cerro es grande.'  
 'This hill is big.'
- b. *yuro 'o teè daiŋ=re*  
 big-INT hill=DIST  
 'Ese cerro es grande.'  
 'That hill is big.'
- c. *yuro 'o-teè daiŋ=ki*  
 big-INT hill=INVIS  
 'Ese cerro (que no podemos ver) es grande.'  
 'That hill (not visible) is big.'

The proximal =*rè* is used for referents very close to the speaker, distal =*re* for things that are further away but (generally) still visible, and =*ki* for objects that are not visible to the speaker at the time of speaking. There is no evidence that the position of the addressee relative to the referent has any importance. In the following minimal pair, =*re* is used to refer to mountains that are actually not visible to the speaker, but where the interlocutors are able to look towards the direction of the mountain. When asked how the meaning would change if =*ki* were substituted, SMG explained that =*ki* would be used if you could not see the mountains at all, even to point in their direction, such as when you are inside and talking about them.

- (10) (SMG, elicited)
- a. *kəd ri-enlo-di-uŋ ð-dain=re*  
 NEG HAB-see-NEG-1P PL-mountain=DIST  
 'We can't see those mountains.'
- b. *kəd ri-enlo-di-uŋ ð-dain=ki*  
 NEG HAB-see-NEG-1P PL-mountain=INVIS  
 'We can't see those mountains.'

The choice of Spanish demonstrative adjective (*ese* versus *aquel*) in elicitation did not have an effect on the =*re* versus =*ki* distinction; =*re* seemed to be the default translation for both and =*ki* would generally only be used when a situation was set up where it was made clear that the referent was not visible. According to SMB, the use of =*ki* implies that you have seen the referent before, or that it is known to the interlocutors (as in (11)); thus, the extension into a past tense marker is not surprising.

(11) (SBL, elicited)

*kun*      *libr=ki*  
 where    book=INVIS

‘¿Dónde está el libro (que estaba aquí antes)?’

‘Where is the book (that was here before)?’

Finally, although =*ki* is usually used when talking about a referent in the past, it would not be used if the referent happened to be visible at the time of speaking, as in the example in (12), in which the mountain in question was understood to be visible.

(12) (SBL, elicited)

*na*    *yu-zunè-è*      *daiŋ=rè*  
 I      COMPL-climb-1s    hill=PROX

‘Yo subí este cerro.’

‘I climbed this hill.’

The fourth determiner =*kaŋ* may indicate an intermediate distance between =*rè* and =*re*, but consultants do not generally seem to classify it as belonging to the same set. Its primary function seems to be an indicative one, and it is probable that its sphere of spatial reference sometimes overlaps the aforementioned pair. Two consultants, SBL and SMG, said that =*kaŋ* is used when pointing to the referent (as in (13a)), but pointing is not a requirement for its use, and there are a few tokens of =*kaŋ* where it seems to function as a definite article in the same way as the other determiners (as in (14)). However, it is possible in some of these examples that the consultant was imagining a situation where he or she was pointing out a referent or picking out a specific entity from a set.

(13) (SMG, elicited)

- a. (This sentence was produced as a translation for the English prompt. When asked if the meaning would change if =*re* were substituted for =*kaŋ*, SMG said that the =*kaŋ* sentence would be used if you were pointing at the pot.)

*tʃi*    *ri-ab*    *nis*    *yiè*    *ri-dʒa-iŋ*      *nis*    *yes=kaŋ*  
 when HAB-fall    water stone HAB-fill-3S.INAN    water pot=MED  
 ‘When it rains the pot fills with water.’

- b. *tʃi*    *ri-ab*    *nis*    *yiè*    *ri-dʒa-iŋ*      *nis*    *yes=re*  
 when HAB-fall    water stone HAB-fill-3S.INAN    water pot=DIST  
 ‘When it rains the pot fills with water.’

(14) (MMC, elicited)

*bitʃi'in na guseɛŋ=kaŋ*  
 small COP girl=MED  
 'La niña es chiquita.'  
 'The girl is small.'

The instances of =*kaŋ* in the texts are consistent with a possible indexical interpretation; see (25) below.

Although the texts provided a large number of tokens of the determiners used in connected speech, there were no examples that clearly showed the expected spatial interpretation. There simply were no situations where objects at different distances from the speaker were contrasted, and in fact there were cases in which different determiners were used to describe the same object in the same spatial position (see section 6). Targeted elicitation, with a clearly defined context and often with real-world referents, easily provided the evidence to establish the basic spatial sense of these determiners. As Mithun (2001:38) found, “[e]licitation can be crucial for filling in paradigms, for securing forms we can predict to exist.” Once the spatial sense was clearly established, however, I found that I was lacking the same types of clear examples for the temporal sense—those that can be provided by elicited minimal pairs and carefully constructed prompts. Thus, although the original analysis of the texts had led to the temporal interpretation, a new round of elicitation was needed to refine it—an approach to fieldwork advocated by Chelliah (2001:152), “in which text collection and elicitation are interwoven in a finely tuned, constantly modulated way.”

**5. THE TEMPORAL SENSE: TEXTS AND ELICITATION.** The most commonly used determiner in the TdVZ texts, which included folktales, local legends and personal narratives, was the distal =*ki*, which is often glossed as indicating ‘past tense’. As mentioned above, the extension from spatial into temporal deixis is a natural one; an entity that the speaker has knowledge of, but that is not currently visible, is generally one that he or she saw sometime in the past. Often, the use of =*ki* coincides with the completive aspect, but it also appears in sentences lacking a verb or where the verb is in another aspect. In these cases, the choice of determiner in the NP provides additional temporal cues about an event or state. There are many instances of these types of temporal cues in the texts, but elicited minimal pairs are the most effective way to illustrate the phenomenon. In the following minimal pair, volunteered by LGL as an example, the stative copula on its own gives no indication of when the woman was seen by the speaker, but the choice of determiner tells the listener whether she is present at the time of utterance, or was there at an earlier time.

(15) (LGL, example given by consultant to explain meaning of =*ki*)

a. *sru-teè na gunaa=ki*  
 nice-INT COP woman=INVIS  
 ‘Que bonita es la mujer. (i.e., de ayer, poquito pasado)’  
 ‘That woman is beautiful. (i.e., was here yesterday, or a little bit in the past)’

- b. *sru-teè na gunaa=re*  
 nice-INT COP woman=DIST  
 ‘Que bonita es esa mujer. (i.e., que esta aquí)’  
 ‘That woman is beautiful. (i.e., who is present now)’

If the consultant’s interpretation were put aside, it could be argued that the determiners in (15) are purely spatial and the past tense interpretation of (15a) is merely inferred from the context. The following pair provides examples of an unambiguous temporal interpretation. As noted above, =*re* is sometimes used for referents that are not strictly visible at the time of utterance, but which are still somehow more accessible than =*ki* referents. =*ki* implies remoteness of the referent, and that remoteness extends to the event or situation in which the referent is involved. In (16), =*re* refers to a man who has just left the scene, while the =*ki* sentence implies that the situation (the man being ‘here’) took place further in the past. The verb in both sentences is in the completive aspect, so only the choice of determiners differentiates between recent and more remote past events.

(16) (LGL, elicited)

- a. *tu beni=re gu-zuwa’a rè*  
 who person=DIST COMPL-be here  
 ‘¿Quién fue este hombre que estuvo aquí?’  
 ‘Who was that man who was (just) here?’
- b. *tu beni=ki gu-zuwa’a rè*  
 who person=INVIS COMPL-be here  
 ‘¿Quién fue este hombre que estuvo aquí?’  
 ‘Who was that man who was here? (i.e., more in the past; it could mean he was here yesterday.)’

The determiner clitics are often used with abstract referents that by their nature are not visible and could not have any spatial orientation relative to the speaker. In these examples, the choice of determiner correlates with a temporal distinction.

(17) (LGL, elicited)

- a. *kwent=rè gu-in ni dzooban-tè-uŋ*  
 story=PROX POT-do that sad-INT-1P  
 ‘El cuento nos va a hacer muy triste.’  
 ‘The story is going to make us really sad.’
- b. *kwent=ki ba-in ni dzooban-tè-uŋ*  
 story=INVIS COMPL-do that sad-INT-1P  
 ‘El cuento hizo que estamos muy triste. (i.e., el cuento ya esta contado)’  
 ‘The story made us really sad. (i.e., it has already been told)’

In the texts, the clitic =*ki* was always used to refer to referents temporally located in the past, but targeted elicitation yielded further possibilities. Just as the choice of determiner can distinguish between recent and more remote past (as in (16)), it may also differentiate between near and more distant future. The former is illustrated by the use of =*re* in (17a), while the latter is illustrated by (18).

(18) (SMG, elicited)

<i>ʒi</i>	<i>tʃin-a'</i>	<i>rupte</i>	<i>ð-gunaa</i>	<i>bak=ki</i>
tomorrow	POT.go.see-1S	the.two	PL.WOMAN	Tlacolula=INVIS

‘Mañana voy a ver / visitar las dos mujeres de Tlacolula.’  
 ‘Tomorrow I’m going to see the two women from Tlacolula.’

The determiners are often used with nouns that express units of time. For the following example, ALB explains that =*re* is used when referring to the year that has just past (*el año recién pasado*) and =*ki* denotes a more distant past year; it is less specific but could be two, three or more years ago.

(19) (ALB, elicited)

a. <i>iz</i>	<i>gu-deεð=rè</i>	<i>ba-tʃiib-tè-uy</i>	<i>ʒi'in</i>	<i>bell-a'</i>
year	COMPL-PASS=PROX	COMPL-scare-INT-1P	son	sister-1S

‘El año recién pasado asustamos al hijo de mi hermana.’  
 ‘This past year we really scared my sister’s son.’

b. <i>iz</i>	<i>gu-deεð=ki</i>	<i>ba-tʃiib-tè-uy</i>	<i>ʒi'in</i>	<i>bell-a'</i>
year	COMPL-PASS=INVIS	COMPL-scare-INT-1P	son	sister-1S

‘El año pasado asustamos al hijo de mi hermana.’  
 ‘That year we really scared my sister’s son.’

Some other common temporal expressions that make use of the determiners are *na'a=rè* ‘right now’ (‘now’ + PROX) and *tʃi=ki* ‘at that time’ (‘when’ + DIST).

Elicitation is also a very important tool in creating examples of ungrammatical sentences, and in finding out what is not possible in a language. In this study it was used to test whether the TdVZ determiner clitics followed any of the same patterns as temporal markers on the NP in other languages. Nordlinger & Sadler (2004) identify two types of tense/aspect/mood (TAM) marking on NP constituents: ‘Propositional Nominal TAM, whereby the nominal carries TAM information relevant to the whole proposition, and Independent Nominal TAM, in which the TAM information encoded on the nominal is relevant only to the NP on which it is marked’ (p.1). Propositional Nominal TAM, as described in Nordlinger & Sadler (2004), is a phenomenon where the clause-level TAM is expressed on the NP, either by case or other morphology that works in conjunction with the verb to express clausal TAM, or by morphemes that appear only on the noun but have a non-local interpretation. This is not the case in TdVZ, where the determiners have scope only over the NP and do not show any type of agreement behavior with the verbal aspect prefixes. The canonical type of Independent Nominal TAM is that which occurs in Guaraní and other

languages of the Americas, in which a noun *x* may be marked with a past tense suffix that would generate a meaning such as ‘the former *x*’, or in the case of a possessed NP, ‘my former *x*’, as illustrated by (20) ((3) and (6) in Nordlinger & Sadler (2004)).

(20) (Gregores & Suárez 1967:127)

- a. *h-óga-kwé*  
 his-house-PST  
 ‘his former house’
- b. *o-va-ta che-róga-kue-pe*  
 3-move-FUT 1SG-house-PST-in  
 ‘He will move into my former house.’

I have not found this type of nominal TAM marking to occur in TdVZ; in elicitation, this kind of information was usually expressed with a relative clause, as in (21) and (22).

(21) (SBL, elicited)

- na'a laadaŋ zuywa'a-daŋ ni yuk liiz-a'*  
 now they HAB.be/stay-3P REL COMPL.be house-1s  
 ‘Ahora ellos viven en mi casa (de antes).’  
 ‘Now they live in my former house.’

(22) (SMG, elicited)

- ni guk tʃiel bizaan-a' ka-zuuz-aŋ*  
 REL COMPL.be husband sister-1s PROG-get.drunk-3s  
 ‘El ex-esposo de mi hermana esta emborrachándose.’  
 ‘My sister’s ex-husband is getting drunk.’

For the following elicited examples, the prompt was making reference to a previously discussed (hypothetical) store that had closed down and was no longer on the site. SMG first produced the sentence in (23a), but when asked if *=re* could be replaced by *=ki*, he gave the sentence in (23b) and said that it would be a more specific translation, and that (23a) had been a direct translation of the Spanish and did not express the fact that the store was no longer there.

(23) (SMG, elicited)

- a. *ben gunaa=re guk ʃteenj-aŋ diend=re*  
 person woman=DIST COMPL.be POSS-3s store=DIST  
 ‘Esa mujer era la dueña de esa tienda.’  
 ‘That woman was the owner of that (former) store.’

- b. *ben gunaa=re guk }teenj-aŋ diend ni ketiru=ki*  
 person woman=DIST COMPL.be POSS-3S store REL NEG.be-INVIS  
 ‘Esa mujer era la dueña de esa tienda.’  
 ‘That woman was the owner of that store that isn’t there.’

According to Klein (1994), tense concerns the relation between ‘topic time’ (TT), defined as the time for which a claim or assertion is made, and the ‘time of utterance’ (TU). In this view, the ‘situation time’ (TSit) is not relevant to tense; the time of the situation being described may extend beyond the boundaries of TT in either direction. It does not make any assertion about the relationship between the TSit and TU for any property of the referent. This is in contrast to the canonical type of Independent Nominal TAM discussed in Nordlinger & Sadler (2004), where the addition of a temporal maker to a noun makes an assertion about the TSit of a noun having some property or being in someone’s possession. Using the Klein (1994) framework, in its temporal sense I analyze *=ki* as a tense marker establishing a topic time that is somewhat remote from the time of utterance, or more precisely, as placing the nominal referent in a remote TT relative to the TU. In the following example, *=ki* refers to some workers—the people who do work for one of the characters in the story. The use of the distal determiner, in addition to having anaphoric discourse reference, places the workers in a remote TT, but does not make the assertion that these people are no longer working for the character at TU or any other time. We only know that they were habitually working for him at the TT being referenced. To make the assertion that they formerly worked for him, or had already completed their work for him, the verb *ruin* ‘do’ in the relative clause would have to be in the completive aspect.

(24) (LGL, text: *Pobreza*)

- beni ni ru-in dziin'-aŋ=ki aŋ ba-in-daŋ gwa*  
 person REL HAB-do work-3S=INVIS and COMPL-do-3P COMPL.go  
*gwæe-dee-dan-ij*  
 COMPL.go-give-3P-3S.OBJ  
 ‘Sus trabajadores lo fueron a dar ...’  
 ‘The people who do work for him (his workers) then went to give it...’

Although the determiner may only have scope over the NP, the interpretations of the minimal pairs given by consultants for many of the above examples do show that the determiner can influence the interpretation of the whole proposition by giving more specific temporal cues than those that can be expressed by the verbal aspect alone. Because the minimal pairs were elicited and were not from naturally-occurring speech, they tell us the possible uses of the determiners to make fine spatial and temporal distinctions, but not whether these uses occur commonly in regular speech. Analysis of the texts, however, does show frequent discourse-based usage of the determiners that makes use of their temporal properties.

**6. DISCOURSE FUNCTIONS: TEXTS.** As mentioned above, there were consultants who gave the Spanish determiners as translations for the TdVZ determiners, and some glossed =*ki* as *tiempo pasado* ‘past tense’. Others had difficulty coming up with a specific Spanish word to gloss any of the determiners, identifying them as discourse markers, or as VC explained, “something used to help the discourse.” This type of usage can really only be understood through the study of natural speech, for reasons noted by Mithun:

An obvious value of the documentation of natural connected speech is that it permits us to notice distinctions and patterns that we might not know enough to elicit, and that might not even be sufficiently accessible to the consciousness of speakers to be volunteered or retrievable under direct questioning. (Mithun 2001:45)

In this section I present some of the discourse functions of the determiners that have been used in the texts. Because the texts were of certain genres (e.g., folktale, local or personal history), probably only a small set of the possible uses of the determiners was represented. Examination of other types of naturally occurring discourse, such as conversations and procedural texts, will most likely reveal further uses of the determiners.

In many of the texts collected for this project, the story is told mainly by a narrator, but there are many instances of quoted speech in which one of the characters is either speaking to another or thinking out loud. Along with the shifts between narrated and quoted text, there is almost always a corresponding shift in the determiners that are used, with the distal =*ki* being the main determiner used by the narrator. When a character from the story is speaking, a second TU is established, and the TT of the quoted utterance falls within that new TU, so the proximate determiners are used. The following example illustrates the shift between narrated and quoted speech. The character in the story has died, and is at the point in his journey to the otherworld in which he has to cross a river. The boatman has given him a choice of two canoes in which to cross, one that costs two *reales* (a type of coin) and another that costs four. The use of =*ki* versus =*re* or =*kaŋ* clearly marks off the narrator’s speech from that of the two characters involved in the dialogue.

(25) (LGL, text: *No Sabemos Para Quien Trabajamos*)

*per laaŋ ketj nee-di-aŋ tʃi-en le'e ni sakt aph rel=ki*  
 but he neg say-neg-3s pot.go-3s in rel cost four real=invis  
 ‘Pero él no quiere ir adentro del que cuesta cuatro reales.’  
 ‘But he doesn’t want to go in the one that costs four *reales*.’

*aʃ ne-ŋ tʃa'-a le'in ni sak tjop reel=kaŋ*  
 and say-3s POT.go-1s in REL cost two real=MED

*re'ebi-aŋ beni=ki.*  
 HAB.say-3S person=INVIS  
 'Y dijo, "Quiero ir adentro en la que cuesta dos reales", le dijo a la persona.'  
 'And he says, "I want to go in the one that costs two *reales*", he says to the person.'

*yubi'n-teè yuk-u lo: hešliu re'ebi-aŋ laaŋ*  
 cheap-INT COMPL.be-2s on earth HAB.say-3s 3s  
 "Fuiste muy avaro en la tierra", le dijo a él.'  
 "You were really cheap on Earth", he said to him.'

*na'a na par kizo'o ni sak tap reel=re*  
 now COP for POT.pay REL cost four real=DIST  
 "Ahora tienes que pagar la que cuesta cuatro reales."  
 "Now you have to pay for the one that costs four *reales*."

The frugal man decides to save the four *reales* and swim across the river. Once he gets to the other side he continues walking, then reaches his destination and meets God. When God asks him why he has arrived wet, the man gives the following explanation, using the determiner =*re* to refer to the canoe even though it is no longer within sight.

(26) (LGL, text: *No Sabemos Para Quien Trabajamos*)

*aš ne-ŋ es ke keth ri-ka'az-di-a' nihi'iz-a kanoa*  
 and say-3s it's that NEG HAB-want-NEG-1s pay-1s canoe  
 'Y le dijo, "Es que no quise pagar la canoa'  
 '...and he said, "it's that I didn't want to pay for the canoe'  
  
*ni sak taph reel=re re'ebi-aŋ laaŋ*  
 REL cost four real=DIST HAB.say-3s 3s  
 'que cuesta cuatro reales", le dijo a él.'  
 'that cost four reales", he said to him.'

Both =*ki* and =*re* have anaphoric discourse reference, but the former is used when the 'remote' narrator is relating past events, and the latter when the ongoing story is told from the perspective of a character involved in the action, establishing a secondary TU-TT relationship contrasting with the matrix TU-TT interface.

In (27), the use of =*ki* in the last clause, referring to a previously mentioned bottle, identifies that portion of the text (*kon škal yubi tar=ki*) as a comment by the narrator, following the quoted thoughts of the character, which are related in first person. Without =*ki*, it would have been ambiguous as to whether that clause was part of the first person narrative or something expressed by the 'remote' narrator.

(27) (LGL, text: *La Bruja Saco a Erasto*)

*ne-ŋ      βel      ʔa-baiŋ      d-βeni=rè      tʃi-a-ʔa-in-daŋ*  
 say-3s    if      POT-wake.up    PL-person=PROX    go-already-POT-do-3p

‘y dijo, “si se despiertan estas gentes (sic) van a’  
 ‘he says, “If these people wake up they are going to’

*tʃi-atizle’ε-daŋ    o    hustis    ʃi-nde’e    ka-junj-a’    rè    nadzab*  
 POT-go.tell-3p    to    police    what-this    PROG-do-1s    here    bad

‘ir a avisar a la justicia que estoy haciendo acá, haciendo malo,’  
 ‘go tell the police what I am doing here, doing bad things,’

*kon    ʃkal    ʔu-bi                      tar=ki*  
 with    how    COMPL-make.noise    bottle=INVIS

‘como sonó el bote.’”

‘because of how the bottle made noise.’”

With most NPs that are not inherently definite, the determiners are used consistently when a specific, previously introduced referent is mentioned in the discourse. For example, in the story “El Tecolote y la Culebra,” the owl, snake and man are indexed with a determiner throughout the story (see (4)), and specific inanimate referents such as the canoe in (25) similarly fail to appear without a determiner. As mentioned above, possessed nouns generally do not take a determiner. In the following example, both referents have been previously introduced, but only the non-possessioned form is marked with a determiner.

(28) (LGL, text: *Zopilote*)

*beni      gunaa=ki      ra-beè-teè-ŋ                      zigab      ni      ka-jun*  
 person    woman=INVIS    HAB-be.happy-INT-3s    idea    REL    PROG-do

*tʃiel-aŋ*

husband-3s

‘Esa mujer (está) muy contenta de lo que está pensando su esposo.’

‘The woman was happy with the idea that her husband had.’

However, there are a few cases where inalienably possessed NPs are marked with a determiner. In the following example, which is from a story about two brothers, the narrator alternates between the possessed form without a determiner and the possessed form followed by =*ki*. I assume this serves a sort of tracking function, to clarify that the same brother who was mentioned in the previous sentence is being referenced.

(29) (LGL, text: *Pobreza*)

*ri-kaaz-aŋ hiakbeen* [a yuk te zu-gwa'a **bets-aŋ**  
 HAB-want-3S know how COMPL.be that HAB.sit brother-3S

'Quiere saber como fue que su hermano vive'  
 'He wants to know how his brother lives'

*zɛki zin-teè nɛɛz gu-dili-aŋ per* **bets-aŋ=ki** ket  
 that.way a.lot-INT road COMPL-search-3S but brother-3S=INVIS NEG

'así. Buscó muchas formas (de saber) pero su hermano no'  
 'in that manner. He searched for a way (to find out) but his brother didn't'

*ri-ze-di-aŋ* [a *ba-an'-aŋ sru per tʃi ba-ziad-aŋ*  
 HAB-tell-NEG-3S how COMPL-do-3S well but when COMPL-find-3S

'le contó como ha cambiado. Pero cuando encontró la forma,'  
 'tell him how he did well. But then he found the way,'

*aş ba-suuz-aŋ* **bets-aŋ** lo gal-rizuuz=*ki* aş  
 and COMPL-get.drunk-3S brother-3S on NMLZ-drunkenness=INVIS and

'luego emborrachó su hermano. En la borrachera'  
 'and he got his brother drunk. In his drunkenness'

*gu-dizle'ɛ* **bets-aŋ=ki** [a *yuktin a-ri-beez-aŋ sru-teè*  
 compl-tell brother=INVIS how COMPL-be already-HAB-sit-3S well-INT

'le contó su hermano como fue de que se entra bien.'  
 'the brother told how it was that he started doing well.'

In the narrative *Historia de Pancho Villa*, LLV makes frequent reference to *benj daiŋ* 'people from the mountains'. Although she sometimes uses a determiner with this phrase, more often she does not. It is likely that it is not always the same group of people being referenced, but rather different individuals from the mountains. However, there are some cases where the context indicates that it is likely the same individuals being mentioned, and the determiner fails to appear. In (30), the people from the mountain are first introduced into the discourse without a determiner, as expected; they are referenced a second time with =*ki*, as expected; then they are mentioned a third time, but without a determiner where one would be expected.

(30) (LLV, text: *Historia de Pancho Villa*)

*ya-zuin* **ben daiŋ** lo zie **βen daiŋ=ki** aş  
 POT-arrive person mountain on COMPL-go person mountain=invis and

'Llegaron las personas de la montaña. Se fueron las personas de la montaña y luego'  
 'The people from the mountains arrived. The people from the mountain went and later'

*be'et-an*      *aş*    *ze*      *da nelj gutier*      *ze-ŋ*      *lua'q*  
 COMPL-come-3P    and    COMPL-go    Don Manuel Gutiérrez    COMPL-go-3S    Oaxaca  
 'vinieron y luego se fue Don Manuel Gutiérrez a Oaxaca.'  
 'they came and Don Manuel Gutiérrez went to Oaxaca.'

*aş*    *tʃi*    *ba-za-an*      *lua'q*    *aş*    *bi-zuin*      ***benj***    ***daij***  
 and    when    COMPL-return-3S    Oaxaca    and    COMPL-arrive    person    mountain  
 'Y cuando regresó de Oaxaca, luego llegaron las personas de la montaña.'  
 'And when he returned from Oaxaca, then the people from the mountains arrived.'

More research on naturally occurring speech is needed to explain the optionality of the determiners in some circumstances. It may be a matter of stylistic differences between speakers or genres.

**7. CONCLUSIONS.** Demonstratives are traditionally described as indexing definiteness and deictic spatial relations, and most Zapotec (and other) grammars give only a brief description with an overview of the type of spatial distinctions they make. However, although the spatial sense may be the primary one from which the other uses are derived, the examination of naturally occurring discourse shows that the 'secondary' uses of this set of determiners are actually the most common, especially for the distal determiner =*ki*. This detailed study of one small portion of the language's grammar shows the importance of using different types of data in language documentation. Targeted elicitation and discussions with native speaker consultants were used to bring out the spatial reference of the determiners, and also to rule out certain types of Independent Nominal TAM. In addition, elicitation brought out other possible discourse uses that had not occurred in the texts, such as the emphatic effect obtained by using a determiner twice for a single referent. The texts illustrated the discourse-level uses of the determiners, which primarily made use of their temporal properties; these uses would have been difficult to discover through elicitation alone. Starting the work on the language with the study of natural connected speech such as narratives also helped to shape this investigation. Rather than the linguists coming up with a list of words and phrases in a contact language for the consultants to translate, in this case the consultants provided the Zapotec words and sentences that we were to work with, and then defined them on their own terms. Although the glosses provided by the consultants at first seemed to be inconsistent, these native speaker intuitions helped to guide a more thorough investigation that tested each possibility given. In the end, each consultant had provided an important piece of the puzzle in describing these multifunctional determiners.

**APPENDIX: TEXTS CITED**

- Lorenzo Gutiérrez Lopez, 2004. Te damm kon te bell / El tecolote y la culebra.  
Lorenzo Gutiérrez Lopez, 2005. La bruja sacó a Erasto.  
Lorenzo Gutiérrez Lopez, 2005. Xa guk te bia'an gallzi loo gezhliu / Como fue que la pobreza vive en el mundo.  
Lorenzo Gutiérrez Lopez, 2005. Kedih Nadondyon Tupar Ri'enyun Ziin / No sabemos para quien trabajamos.  
Lorenzo Gutiérrez Lopez, 2007. Xa guk te laam gul bets / Como fue que el zopilote se llama 'gul bets'.  
Lucia Lazaro Vasquez, 2005. Historia de Pancho Villa (translated by Viridiana Chavez).

## REFERENCES

- ANGULO, JAIME DE. 1926. Tone patterns and verb forms in a dialect of Zapotec. *Language* 2(4). 238-250.
- CHELLIAH, SHOBHANA L. 2001. The role of text collection and elicitation in linguistic fieldwork. In Paul Newman & Martha Ratliff (eds.). 152-165.
- DE ANGULO, JAIME (see Angulo)
- GIVÓN, TALMY. 2001. *Syntax*, vol. 1. Amsterdam & Philadelphia: John Benjamins.
- GORDON, RAYMOND G., JR. (ed.). 2005. *Ethnologue: Languages of the world*, 15th edn. Dallas: SIL International. <http://www.ethnologue.com> (10 May, 2008.)
- GREGORES, EMMA & JORGE SUÁREZ. 1967. *A description of colloquial Guaraní*. The Hague: Mouton.
- INSTITUTO NACIONAL DE ESTADÍSTICA GEOGRAFÍA E INFORMÁTICA (INEGI). 2008. Censo 2005. <http://www.inegi.gob.mx/est/contenidos/espanol/sistemas/censo2005> (10 May, 2008.)
- KLEIN, WOLFGANG. 1994. *Time in language*. London & New York: Routledge.
- LILLEHAUGEN, BROOK DANIELLE. 2006. *Expressing location in Tlacolula Valley Zapotec*. Los Angeles, CA: University of California dissertation.
- LOWES, GWENDOLYN & AUSENCIA LOPEZ CRUZ. 2007. Potential aspect and the role of tone in two variants of Zapotec. In Eloina Miyares Bermúdez & Leonel Ruiz Miyares (eds.), *Linguistics in the twenty-first century*, 135-144. Cambridge: Cambridge Scholars Press.
- MITHUN, MARIANNE. 2001. Who shapes the record: The speaker and the linguist. In Paul Newman & Martha Ratliff (eds.). 34-54.
- MUNRO, PAMELA & FELIPE H. LOPEZ. 1999. *San Lucas Quiavini Zapotec dictionary*. Los Angeles: UCLA Chicano Studies Research Center.
- NEWMAN, PAUL & MARTHA RATLIFF (eds.), *Linguistic fieldwork*. Cambridge: Cambridge University Press.
- NORDLINGER, RACHEL & LOUISA SADLER. 2004. Nominal tense in crosslinguistic perspective. *Language* 80(4). 776-806
- PICKETT, VELMA B. & CHERYL BLACK. 1998. *Gramática popular del Zapoteco del Istmo. Juchitán*: Instituto Lingüístico de Verano A.C. y Centro de Investigación y Desarrollo Binniza.
- SMITH-STARK, THOMAS C. 2003. Algunas isoglosas Zapotecas. Paper presented at the III Coloquio Internacional de Lingüística. México, D.F.

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