

Resumptive pronouns in Colonial Valley Zapotec relative clauses

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1 Introduction¹

The Zapotec languages are a diverse group of Otomanguean languages spoken in Oaxaca, Mexico. Colonial Valley Zapotec (CVZ) refers to the Zapotec language attested in a set of documents written in the valleys of Oaxaca in the Mexican colonial period (1550–1810). These texts fall into two main groups: handwritten administrative documents (e.g. testaments) and printed books produced under the auspices of the Catholic church (see e.g. Cordova 1578a, 1578b; Feria 1567).

Like many other Zapotec languages, CVZ is a non-pro-drop VSO language. Subject pronouns appear as clitics on the verb. T/A/M is obligatorily marked as a prefix on the verb. Modern Zapotec languages have phonetic tone, phonation, and fortis/lenis contrasts, but these features are mainly underspecified in the CVZ orthography, which is generally irregular.²

Foreman & Munro (2007) described resumptive pronouns on subject- and object-headed relative clauses. However, in the 10 years since their research, the analyzed CVZ corpus has grown significantly. It is worth re-examining their analysis based on new data, and in particular the expansion of the corpus has allowed for a more detailed description of resumptive pronouns in subject-headed RCs.

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²The baseline of glosses for CVZ data represents the original orthography used in each document. See Smith Stark 2003 and Broadwell 2015 for discussion of CVZ orthography and phonology.

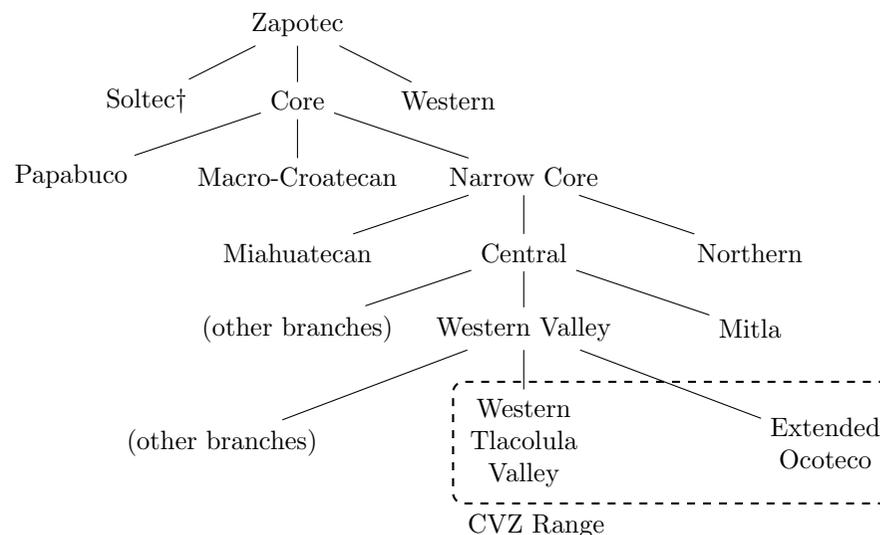


Figure 1: Classification of Zapotec languages (see Campbell 2017, Broadwell & Lillehaugen to appear)

2 Relative clauses in CVZ

Relative clauses in CVZ appear after the NP they modify and are marked with a relativizer *ni*. Foreman & Munro 2007 identified both subject- and object-headed RCs in CVZ; genitive-headed RCs are also attested in the current corpus.³

³I use the following abbreviations in glosses: 1, first person; 2, second person; 3, third person; ANAP, anaphoric; COMP, completive; CAUS, causative; DEM, demonstrative; HAB, habitual; H/P, habitual/progressive; INV, invisible; PERF, perfective; PL, plural; POSS, possessive; PROX, proximate; REL, relativizer; SG, singular; ST, stative. On MacZ pronouns: D, dative; N, nominative; A, accusative.

- (1) a. Subject-headed
 x-quelahuexihui=a [ni n-oo lachito=ya]
 POSS-sin=1SG REL ST-be.contained chest=1SG
 ‘my sins that are in my chest’ (Aguero-1;9)
- b. Object-headed
 nique [ni cu-llaana=lo]
 3PL.DEM REL PERF-steal=2SG
 ‘those things that you stole’ (Aguero-42;10)
- c. Genitive-headed
 benni que [ni pee-ca ñaa=lo
 (person that)_i REL PERF:CAUS-take hand=2SG
 x-pellalati=ni]
 POSS-body=3_i
 ‘that person whose body you took with your hand’ (Aguero-31;4)
 (lit. ‘that person that your hand took their body’)

In some subject-headed relative clauses, a resumptive pronoun appears on the verb, for example in (2).

- (2) Subject-headed relative clause with a resumptive pronoun
 Jesu christo xini Dios [ni Co-ti=**ni**
 (Jesus Christ child God)_i REL PERF-die=3_i
 Lani cruz]
 stomach/in cross
 ‘Jesus Christ, son of God, who died on the cross’ (A1697-3)

In my current set of 102 analyzed subject-headed RCs, 49 (48%) have a resumptive pronoun and 63 do not. Both of the genitive-headed relative clauses I have so far identified also make use of a resumptive pronoun (e.g. 1c)). However, in a set of 54 object-headed RCs, *none* use a resumptive pronoun. Here I interpret non-occurrence as ungrammaticality.

Resumptive pronouns	
Subject-headed RCs	sometimes attested (n=102, 49 RPs)
Object-headed RCs	never attested (n=54)
Genitive-headed RCs	always attested (n=2)

Table 1: Resumptive pronoun attestation in CVZ relative clauses

3 Comparing restrictive vs. non-restrictive relative clauses in CVZ

Further analysis of subject-headed relative clauses revealed that resumptive pronouns are preferred in non-restrictive RCs over restrictive RCs. Distribution of resumptive pronouns across restrictive and non-restrictive RCs is shown in Table 3.

- (3) a. Restrictive relative clause (no resumptive pronoun)
 toti [ni na-zaca xillani]
 any REL ST-be.good servant
 ‘any [people] that are good servants [... they will be given eternal life]’ (Feria-40v;1.3)
- b. Non-restrictive relative clause (with resumptive pronoun)
 na Maria de la Cruz nijchijo [nij n-aca=**yaa**
 1SG_i María de la Cruz Dionisio REL ST-be=1SG_i
 xijnij chapa guetao Matias de la Cruz]
 child young.woman deceased Matias de la Cruz
 ‘I, María de la Cruz Dionisio, the child of the late Matías de la Cruz’
 (lit. ‘I, María de la Cruz Dionisio, who I am the child of the late Matías de la Cruz’) (Co721-1;7-8)

	No resumptive pronoun	Resumptive pronoun
Non-restrictive RCs	7 (25%)	22 (75%)
Restrictive RCs	36 (75%)	12 (25%)

Table 2: CVZ resumptive pronoun distribution in NRRCs vs. RRCs

Some specific notes: Determining whether a relative clause is restrictive or non-restrictive is obviously a little tricky. I only included in my counts here those relative clauses for which I felt certain about their status (hence the total count of 77 RCs in Table 3 as compared to the count of 102 subject-headed RCs in Table 1).

Notably, I did not count here any relative clauses headed by either *dios* ‘God’ or *bitao* ‘God/life spirit’, to avoid making claims about how any individual Zapotec person understood the Christian god they were referring to. Knowing that resumptive pronouns are preferred in NNRCs, we can investigate how these ‘God’-headed relative clauses pattern. These data are insufficient to support any strong conclusion (only 18 examples) There are some observable patterns, however we would expect different speakers to potentially pattern differently, and furthermore this data may be impacted by the formulaic nature of these clauses. This is a possible area of future research as the corpus grows.

	No resumptive pronoun	Resumptive pronoun
‘ <i>dios</i> , truly <i>bitao</i> ’	4 (100%)	0 (0%)
<i>dios</i>	2 (14%)	12 (86%)
All	6 (33%)	12 (67%)

Table 3: Resumptive pronouns in CVZ RCs modifying ‘god’

4 Resumptive pronoun typology

Keenan & Comrie (1977) argue that certain NP position are more accessible to relativization than others and posit the accessibility hierarchy in (4). They find that if the pronoun retention strategy of relativization is used with a particular NP position, it will also be used with all the lower positions (Keenan & Comrie 1977: 92).

- (4) Accessibility Hierarchy (Keenan & Comrie 1977: 66)
 Subject > Direct Object > Indirect Object > Oblique > Genitive > Object of Comparison

Keenan & Comrie also posit that any relativization strategy (e.g. resumptive pronouns) must apply to a continuous segment of the Accessibility Hierarchy (1977: 67). Additionally, Keenan & Comrie suggest that once resumptive pronouns are permitted for relativizing some position, they should also be permitted for all lower positions (1977: 92; Table 2). The CVZ data presented above is a counter-example to both of these propositions.

However, the dependence of resumptive pronouns on the restrictiveness of the RC is attested cross-linguistically. This tendency is also found, for example, in Brazilian Portuguese and Hebrew (Ariel 1999: 223). A related effect is found in English, where non-restrictive readings are only permitted with relative pronouns which encode some information about the head (e.g. *who*) and not with the relativizer *that* (a similar effect is also found in Polish, see Szczegielniak 2005).

Ariel (1999) motivates this tendency by arguing that resumptive pronouns are preferred over the gap strategy when the “degree of accessibility” of the head entity is low by the time the relativized position is reached. The degree of accessibility is based on many factors, for example the complexity of the head, the head category’s position on Keenan & Comrie’s accessibility hierarchy, and the restrictiveness of the relative clause, evaluated as whole. Ariel’s theory does not explain the ungrammaticality of resumptive object pronouns in CVZ, but further research in Zapotec resumptive pronouns should consider multiple accessibility factors.

5 Relative clauses (and resumptive pronouns) in modern Zapotec languages

5.1 San Lucas Quiaviní Zapotec (Central, Valley)

Foreman & Munro (2007) describe relative clauses in San Lucas Quiaviní Zapotec (SLQZ), a presumed descendant of CVZ. In SLQZ, resumptive pronouns are disallowed in subject- or object-headed RCs, even when they would prevent ambiguity.

(5) San Lucas Quiaviní Zapotec

R-uhnybèe=nn bùunny [nih gw-àa'izy Jwaany.]
 HAB-know=1PL person REL PERF-hit Juan

'We know the person who hit Juan' / 'We know the person who Juan hit' (Foreman & Munro 2007: ex. 9)

(6) a. San Lucas Quiaviní Zapotec

*R-uhnybèe=nn bùunny [nih gw-àa'izy=**ëng**
 HAB-know=1PL person REL PERF-hit=3SG.PROX

Jwaany.]
 Juan

Intended: 'We know the person who hit Juan' (Foreman & Munro 2007: ex. 14a)

b. San Lucas Quiaviní Zapotec

*R-uhnybèe=nn bùunny [nih gw-àa'izy Jwaany
 HAB-know=1PL person REL PERF-hit Juan

la'anng.]
 3SG.PROX

Intended: 'We know the person who Juan hit' (Foreman & Munro 2007: ex. 14b)

SLQZ requires resumptive pronouns in genitive-headed relative clauses.

(7) San Lucas Quiaviní Zapotec

R-uhnybèe=nn bùunny [nih gw-àa'izy
 HAB-know=1PL person REL PERF-hit

behts=**nii'** Jwaany.]
 brother(of.man)=ANAP Juan

'We know the person whose brother hit Juan' (lit. 'who his brother hit Juan') (Foreman & Munro 2007: ex. 15)

5.2 (San Pablo) Macuilianguis Zapotec (Northern)

Foreman & Munro (2007) also describe relative clauses in Macuilianguis Zapotec (MacZ), a Northern Zapotec language. In MacZ, resumptive pronouns are optional in subject-headed RCs but disallowed in object-headed RCs.

(8) a. Macuilianguis Zapotec

Nabiiia'=ni=tè' bènnè' nu' guccu(=**nà**)
 ST.know=PREP=1SG.D person REL COMP.cut(=3N)

ittsa-icchá=lù'.
 hair-head=2SGG

'I know the person who cut your hair' (Foreman & Munro 2007: ex. 10)

b. Macuilianguis Zapotec

Carru nu' guyo'o Felipe=**à(*=nà)**
 car REL COMP.buy Felipe=INV(*=3A)

bitappa'=nà.
 COMP.break.down=3N

'The car that Felipe bought broke down.' (Foreman & Munro 2007: ex. 11)

If the context is potentially ambiguous, a resumptive subject pronoun is *required*, avoiding the ambiguous sentences found in SLQZ.

(9) Macuilianguis Zapotec

Beyùú' nu' begwiia'*(=**nà**) Felipe=á náà'yá'
 man REL COMP.see*(=3N) Felipe=INV yesterday

naa=nà béttsi'=yà'.
 ST.be=3N brother.M.SG=1SGG

'The man who saw Felipe yesterday is my brother' (Foreman & Munro 2007: ex. 12)

Like SLQZ, MacZ also requires resumptive pronouns in genitive-headed relative clauses.

5.3 (*San Juan*) Atepec Zapotec (*Northern*)

Nellis & Nellis (1983) describe that in Atepec Zapotec, subject-headed relative clauses with a restrictive meaning ("una función especificativa") appear without a resumptive pronoun, i.e. with the gap strategy ("El verbo de la oración de relativo suprime el pronombre dependiente que se refiere al antecedente").

(10) a. Atepec Zapotec

Birìa nùbeyùu' [nù bétti béccu'á'.]
 'Salió el hombre que mató a ese perro.' (Nellis & Nellis 1983: 365)
 ('The man that killed that dog left.')

b. Atepec Zapotec

bétti **bí** béccu'á'
 'mató él a ese perro.' (Nellis & Nellis 1983: 365)
 ('He killed that dog.')

However, in a non-restrictive relative clause ("[que sumple] información adicional sin calificar o determinar al sustantivo") there is a resumptive pronoun.

(11) Atepec Zapotec

Béccu' [nù gutéèl.lá'á intì'á] nna bétti
 perro que mordió él a mí aquel mató

nùbeyù'á' na.
 hombre ese

'Aquel perro que me mordió, ese hombre lo mató.' (Nellis & Nellis 1983: 365)

('That dog, which bit me, that man killed it.' or 'That man killed that dog, which bit me.')

Nellis & Nellis do not describe object-headed or genitive-headed relative clauses.

5.4 *Summary*

	Subject-headed	Object-headed	Genitive-headed
CVZ	Optional, preferred in NRRCs	never attested (n=54)	always attested (n=2)
SLQZ	Ungrammatical	Ungrammatical	Obligatory
MacZ	Optional, obligatory in ambiguous contexts	Ungrammatical	Obligatory
AZ	Ungrammatical in RRCs, required in NRRCs	[no data]	[no data]

Table 4: Distribution of resumptive pronouns in different Zapotec languages

SLQZ is very typical of what we would expect based on Keenan & Comrie's (1977) accessibility hierarchy: resumptive pronouns are required low on the hierarchy (genitive-headed RCs) but ungrammatical higher up (subject- and object-headed RCs).

CVZ and MacZ, on the other hand, are typologically unusual in several ways. Both languages allow resumptive subject pronouns, which Keenan & Comrie find is unusual cross-linguistically. Furthermore in both languages

resumptive pronouns are permitted along a non-continuous section of the proposed accessibility hierarchy (subject- and genitive-headed but not object-headed), which Keenan & Comrie claim to be impossible. As Foreman & Munro (2007) note, the presence of this typologically unusual system in both Central (CVZ) and Northern (MacZ and AZ) Zapotec languages motivates reconstruction of the system to Proto-(Core)-Zapotec.

Both CVZ and AZ prefer/require resumptive pronouns when the (subject-headed) relative clause is non-restrictive, a trend which is found cross-linguistically (Ariel 1999). As this tendency is attested in two branches of Core Zapotec (and as Ariel's research suggests that restrictiveness is a prominent factor in resumptive pronoun use), future research on Zapotec relative clauses should consider restrictiveness and include studies of text corpora to examine both tendencies and absolutes.

6 Side note: Ambiguous sentences and Foreman & Munro's SPC

Foreman & Munro (2007) propose the following constraint to explain why CVZ and MacZ allow resumptive subject pronouns, and in particular why they are required in MacZ when the sentence would otherwise be ambiguous:

- (12) Subject Parsing Constraint (SPC) (Foreman & Munro 2007: ex. 23)
 If an overt NP immediately follows the verb and satisfies the verb's selectional restrictions for subject, parse it as the grammatical subject.

Foreman & Munro found no ambiguous RCs in their CVZ data from 2007. However, I have found one potentially ambiguous example, shown below, where the object NP *lechelani* 'his spouse' immediately follows the verb (with no resumptive subject-pronoun).

- (13) beni niguio [ni ri-gapa] [ni
 (person male)_i REL H/P-hit REL
- ri-bibelloo lechela=ni] [ni t-axe=ni
 H/P-thrash.face (spouse=3_i)_j REL H/P-pull.hair=3_i
- quichaquique=ni]
 hair=3_j
- 'a man that hits, that thrashes his spouse in the face, that he pulls her hair' (Feria-64v;5.2)

CVZ Sources

Abbreviation	Description
Aguero	Agüero 1666 (<i>Confessionario en la mesma lengua zapoteca</i>)
A1697	1697 Testament from San Pedro el Alto (AGN, Tier- ras, Leg. 310, Exp. 2, 62r–63r). Available on- line at https://ticha.haverford.edu/en/texts/A1697/ . Originally analyzed by linguistics students at Haverford College (Fall 2013).
Co721	1721 Testament from San Bartolome Coyotepec (AGEO, Alcaldías Mayores, Leg. 42, Exp. 13, 2r–4v). Available online at https://ticha.haverford.edu/en/texts/Co721/ . Originally an- alyzed by the UCLA Zapotexts group.
Feria	Feria 1567 (<i>Doctrina cristiana en lengua castellana y çapoteca</i>)

Table 5: CVZ documents referenced

References

- Agüero, Cristóbal de. 1666. Confessionario en la mesma lengua zapoteca. In *Miscelaneo espiritual, en el idioma zapoteco*, Mexico: Por la Viuda de Bernardo Calderon, en la calle de San Augustin. archive.org/stream/miscelaneoespiri00ager#page/233/mode/2up. Courtesy of the John Carter Brown Library.
- Ariel, Mira. 1999. Cognitive universals and linguistic conventions: The case of resumptive pronouns. *Studies in Language* 23(2). 217–269.
- Broadwell, George Aaron. 2015. Discovering orthographic traditions in Colonial Valley Zapotec. Paper presented at the Conference on Indigenous Languages of Latin America VII, Austin.
- Broadwell, George Aaron & Brook Danielle Lillehaugen. to appear. Considerations in the creation of an electronic database for Colonial Valley Zapotec. *International Journal of the Linguistic Association of the Southwest* 32(2).
- Campbell, Eric W. 2017. Otomanguean historical linguistics: Exploring the subgroups. *Linguistics and Language Compass* 11(7). 1–23. doi:10.1111/lnc3.12244.
- Cordova, Fray Juan de. 1578a. *Arte en lengua zapoteca*. Mexico: En casa de Pedro Balli. archive.org/stream/arteenlenguazapo00juan. Courtesy of the John Carter Brown Library.
- Cordova, Fray Juan de. 1578b. *Vocabulario en lengua çapoteca*. Mexico: Pedro Charre y Antonio Ricardo. Facsimilie. Mexico: Ediciones Toledo (INAH), 1987.
- Feria, Fray Pedro de. 1567. *Doctrina cristiana en lengua castellana y çapoteca*. Mexico City: En casa de Pedro Ocharte. archive.org/details/doctrinachristia00feri. Courtesy of the John Carter Brown Library.
- Foreman, John & Pamela Munro. 2007. Reconstructing a typologically marked strategy for Zapotec relative clauses. In Susan Buescher, Keri Holley, Evan Ashworth, Clay Beckner & Christopher Shank (eds.), *Proceedings of the sixth annual high desert linguistic society conference*, 141–153. Albuquerque, NM: High Desert Linguistics Society.
- Keenan, Edward L. & Bernard Comrie. 1977. Noun phrase accessibility and universal grammar. *Linguistic Inquiry* 8(1). 63–99.
- Nellis, Neil & Jane Goodner de Nellis. 1983. *Diccionario zapoteco: Zapoteco de Juárez* (Serie de vocabularios y diccionarios indígenas “Mariano Silva y Aceves” 27). Instituto Lingüístico de Verano, A.C. <https://www.sil.org/resources/archives/10934>.
- Smith Stark, Thomas C. 2003. La ortografía del zapoteco en el Vocabulario de fray Juan de Córdoba. In María de los Ángeles Romero Frizzi (ed.), *Escritura zapoteca: 2,500 años de historia*, Mexico City: INAH.
- Szczegieliński, Adam. 2005. Two types of resumptive pronouns in Polish relative clauses. *Linguistic Variation Yearbook* 5. 165–185.