

Possession

Stephen A. Marlett

The [Zapotec](#) Grammar Files

Stephen A. Marlett (February 2010) Possession [<http://mexico.sil.org/resources/archives/60872>]. In: Cheryl A. Black, H. Andrew Black and Stephen A. Marlett (eds.) The Zapotec grammar files. © [SIL International](#). These are working papers that are periodically updated, expanded, and corrected. Comments or corrections can be sent to the editors (see the [index](#) page).

Contents

1	Introduction	2
2	The direct possessive construction	3
3	The indirect possessive construction	6
3.1	Linking word is possessed noun	6
3.2	Linking word is preposition	8
4	Paraphrases between constructions	13
5	Syntactic factors affecting constructions	14
6	Recursion	16
7	Expressing 'his/her own'	18
8	Predicative possession	20
9	Interrogatives and possession	22
10	Possessive pronouns	24
11	Effect of the possessor on the subject	24
A	Details about possessors	26
	References	30

1 Introduction¹

Attributive possession is shown in two ways. One is a direct possessive construction (section 2) in which the possessor simply follows the possessum. The second is an indirect possessive construction (section 3) using a phrase headed by a word that may be analyzed as either an inherently possessed noun or a preposition. Some varieties have both constructions, usually in complementary distribution. A few varieties permit paraphrases between constructions in some limited cases, with interesting semantic results (section 4). Some varieties have only the indirect construction (see appendix A). One variety has been documented as having a syntactic condition on the distribution of the two constructions, but this factor is almost certainly under-reported (section 5).

A typology of languages is presented in Nichols & Bickel (2008) that focuses on the possessive construction that is the "default or [that] has the fewest restrictions" and purposefully excludes the restrictive type used with "inalienable" possession only. Some varieties of Zapotec (those that do not use the indirect construction at all) would be classified into the relatively small group of languages that have no marking on either the possessor or the possessum. Other varieties (those that use the indirect construction with common nouns) would be in the relatively large group that have

¹I thank Beth Merrill and Cheri Black for their helpful comments. The following are found in other files: [Transcription Conventions](#) and a table of all [Data Sources](#) for Zapotec. The abbreviations used in this paper are: 1PL = first person plural, 1PLIN = first person plural inclusive, 1SG = first person singular, 2SG = second person singular, 3 = third person, 3AL = third person alternate, 3AN = third person animal, 3F = third person feminine, 3FO = third person formal, 3H = third person human, 3INFO = third person informal, 3M = third person masculine, AFM = aforementioned, C = completive, DIM = diminutive, DIST = distal, FE = female ego (relating to kinship term), FOC = focus, FREQ = frequentative, H = habitual, INTNS = intensifier, ME = male ego (relating to kinship term), PL = plural, POSS = possessive, PRON = pronoun, PROX = proximal/proximate, Q = question particle/marker, S = stative.

marking on the dependent (the possessor). Therefore Zapotec as a language genus is typologically divided with respect to this feature.

As should be expected, recursion within the possessive constructions is possible. This fact is documented explicitly here for Zapotec in section 6.

There is no general way to express a reflexive possessor (but see section 7 and section 11). There is also no construction involving an external possessor (Payne & Barshi 1999)) in which the possessor is indicated as an argument of the verb (as in Spanish 'Me lavé las manos', *I washed my hands*).

Predicative possession (section 8) may be expressed with certain transitive verbs. It may also be expressed (in some varieties, at least) using a construction that utilizes an existential verb and one of the attributive possession constructions.

The position of an interrogative pronoun in a possessive construction is an interesting fact about Zapotec as well as other languages of Mesoamerica. These facts are presented and discussed briefly in section 9.

Section 10 documents the way in which a possessive construction with a null head produces something that is sometimes translated as and sometimes analyzed as a possessive pronoun.

Finally, in section 11 the effect of coreference between a subject and a possessor is illustrated, although this topic is not developed in depth here.

2 The direct possessive construction

The direct possessive construction is used when the possessum is an inherently possessed noun, the category that is typical of kinship terms and body part nouns. This is illustrated by examples (1)-(2). (See [Nouns, this series](#) for other examples including those with derived possessed nouns.)

- (1) zhuis Zhuan
[zpf] ʒuis ʒuan
 grandmother Juana
 'abuela de Juana'
 'Juana's grandmother'

[Martínez & Martínez (f.n.)]

- (2) ro' bëi'k
[zpf] roʔ bæiʔk
 mouth dog
 'boca de perro'
 'dog's mouth'

[Martínez & Martínez (f.n.)]

The direct possessive construction cannot be used for possession of a common noun (see [Nouns, this series](#)), as examples (3)-(4) illustrate.

- (3) * lo'on Bëd
[zpf] loʔn bæd
 bed Pedro
 ('cama de Pedro')
 ('Pedro's bed')

[Martínez & Martínez (f.n.)]

- (4) * beko' Pedro
 [zpc] beko? pedro
 dog Pedro
 ('perro de Pedro')
 (*'Pedro's dog'*)

[L. Lyman (f.n.)]

A pronoun may be used in lieu of the NP possessor, of course. This pronoun is commonly an enclitic (see [Personal pronouns: distribution, this series](#)), and is in fact written as a suffix in many varieties although it is arguably not inflection in virtually all varieties, with Rincón being an important exception (Pickett 1990). See examples (5)-(6).²

- (5) xuzi ro
 [zpc] ʃuzi =ro
 father 1PLIN
 'nuestro (incl.) padre'
 (*'our (incl.) father'*)

[H. Lyman (2007:18)]

- (6) ni'a ba'
 [zpc] ni?a =ba?
 foot 3AN
 'su pata'
 (*'its foot/paw'*)

[H. Lyman (2007:18)]

The semantic relationship between possessor and possessum is, as in other languages, more abstract than actual possession. In fact, with inherently possessed nouns it is rarely one of actual possession since the (relatively small) inventory of inherently possessed nouns is primarily kinship terms and body part terms. Inherently possessed nouns that are not in those two groups are very few.³ See examples (7)-(8). In these examples 'd' stands for 'dependent' (the possessum) and 'h' for 'head' (the possessor).⁴

- (7) a. gicho Lipi
 [zpc] gitʃo lipi
 head Felipe
 'cabeza de Felipe'
 (*'Felipe's head' <d has body part h>*)

[H. Lyman (2007:18)]

²If this is true (as we believe), Isthmus Zapotec [zai] is incorrectly classified in Dryer (2008).

³A count of the non-derived possessed nouns in the Choapan [zpc] dictionary in preparation (L. Lyman, p.c.) gave a total of about 115 (including some compounds). The non-compound body part nouns numbered about 62, and the non-compound kinship terms about 22. (I counted a term such as those for '*companion*' and '*mistress*' in the kinship group.) The nouns that actually referred to items that might be possessed in the sense of ownership included perhaps only the following lexemes (given here in translation): '*strength belt*', '*rod of authority*', '*pillow*', and '*hat*'. Terms that are not body parts, kinship terms, nor possessions included those for '*salary*', '*characteristic*', '*owner, boss*', '*place*', and '*custody*'. A kinship term may also have extended meanings that might be overlooked. The word for '*child*' is used with the name of a fruit to refer to a seedling of that species of plant: /ʒiʲ qjelaʲ/ (*child banana*) '*banana seedling*'.

⁴This presentation follows one in Huddleston & Pullum (2002:474) for English.

- b. xna' Zhua
 ʃna? ʒua
 mother Juan
 'madre de Juan'
'Juan's mother' <d has kin relation to h> [H. Lyman (2007:18)]
- c. lidxi ba'
 liɕi =ba?
 home.of.animal 3AN
 'su nido, madriguera, o lugar donde vive'⁵
'its nest, burrow, or place to live' <d typically lives in h> [L. Lyman (f.n.)]
- d. xa'n ba'
 ʃaʔn =ba?
 owner 3AN
 'su dueño' o 'su patrón'
'its owner' or 'his/her boss' <d owns h> or <d has superior h> [H. Lyman (2007:27)]
- e. zhaba Pedro
 ʒaba pedro
 clothing Pedro
 'ropa de Pedro'
'Pedro's clothing' <d owns h> [L. Lyman (f.n.)]
- (8) a. ladx a
 [zab] laɕ =a
 town 1SG
 'mi pueblo'
'my town' <d considers h to be locus of typical residence> [Jones (f.n.)]
- b. chial a
 tʃial =a
 spouse 1SG
 'mi esposo/a'
'my spouse' <d has married relation to h> [Jones (f.n.)]

The semantic relationship between d and h in these phrases may also be expressed predicatively. See section 8.

When a variety has the morphological means to derive possessed nouns from common nouns (see [Nouns, this series](#)), then the semantic relationships between d and h are more varied. The notion of ownership is especially common, but it is not the only one. The variety of relationships depends on the productivity of the derivational rule. If that rule is relatively unproductive, as in Choapan [zpc], the increase in the number of semantic relationships is quite small.

⁵The meaning of /liɕi/ in this variety is markedly different from its cognate in many other varieties in that it is limited to animal possessors. In many varieties, this lexeme simply means *'home'*.

Examples that seem to be appropriately analyzed as the appositional NP construction include (12):

- (12) to'u xti' Ana
 [zai] toʔu ʃtiʔ ana
 turkey possession Ana
 'guajolote de Ana'
 'Ana's turkey'

[Pickett, Black & Marcial (2001:23)]

Such phrases without an explicit possessum can be arguments as well. See the examples in (13), which do not include explicit representation of the null head except by the double bracketing. In example (13a) the possessive phrase is a direct object, in (13b) it is a subject, and in both (13c) and (13d) it is a predicate nominal.

- (13) a. Bedane be [[xtinne']].⁶
 [zai] bedane =be ʃtin:e-ʔ
 C-bring 3H possession-1SG
 'Trajo el mío/la mía.'
 'S/he brought mine.'

[Pickett, Black & Marcial (2001:36)]

- b. Sikaru [[xti be]].
 sikaru ʃti =be
 pretty possession 3H
 'El suyo es bonito.'
 'His/hers is pretty.'

[Pickett, Black & Marcial (2001:36)]

- c. [[Xti be]] ndi'.
 ʃti =be ndiʔ
 possession 3H PRON.PROX
 'Éste es de él/ella.'
 'This is his/hers.'

[Pickett, Black & Marcial (2001:94)]

- d. [[Xti' Juana]] ndi'.
 ʃtiʔ xuana ndiʔ
 possession Juana PRON.PROX
 'Éste es de Juana.'
 'This is Juana's.'

[Pickett, Black & Marcial (2001:94)]

Examples with such nouns — at least with words that are apparent cognates with /ʃti/ — are not entirely limited to cases of semantic possession, however, as examples (14)-(16) indicate.

⁶The first person singular possessed form of /ʃti/ displays a morphological complication in this variety — the fortis /n:/ in the middle is unexpected; most of the combinations of /ʃti/ plus pronoun are completely regular. The form ends in a checked vowel when it is not followed by an overt pronoun.

- (14) yehdx xten nu
 [zaw] je^hɕʒ ʃten = nu
 town possession 1PLIN
 'nuestro pueblo'
'our town' <d considers h to be locus of typical residence> [Briggs (1961:74)]

- (15) a. tub yalgoyit che'en pellet
 [zpo] tub jalgojit tʃe²n pellet
 a/one game possession ball
 'un partido de básquet'
'a game of ball' <d characterizes h>
 [Riggs unpublished text cited in [The le'e focus phrase, this series](#)]

- b. rob che'en yat
 rob tʃe²n jat
 basket possession tortilla
 'una canasta de tortillas'
'a basket of tortillas' <d is contained in h> [Riggs (1991:38)]

- c. Universidad che'en Chicago
 universidad tʃe²n tʃikago
 university possession Chicago
 'Universidad de Chicago'
'University of Chicago' <d is location of h> [Riggs (1991:38)]

- d. Republika che'en China
 republika tʃe²n tʃina
 republic possession China
 'República de China'
'Republic of China' <d is an h>, or <d is the name of h> [Riggs (1991:38)]

- (16) nis xte Galilea
 [zab] nis ʃte galilea
 water possession Galilee
 'mar de Galilea'
'sea of Galilee' <d is the area where h is located and by which h is known>
 [NT, Mt 15:29]

3.2 Linking word is preposition

If the linking word cannot occur with a null head (see the examples in (13)) — although this is not an absolute criterion — one should consider viewing that word as a preposition that heads a PP, as schematized in (17).

- (17) Possessum Possessor
 [NP] [P [NP]]_{PP}
 '*of*'
 linking word

Some examples that seem to be appropriately analyzed as the prepositional construction include those in (18)-(23).⁷ The semantic relationships are also indicated for these examples to demonstrate the broad range that they display.

- (18) a. larëla kie maestro
 [zpc] laræla kie maestro
 blanket of teacher
 'cobija del maestro'
 '*teacher's blanket*' <*d owns h*> [H. Lyman (2007:18)]
- b. bdao' kie yak e'
 bdao? kie jak = e?
 baby of PL 3FO
 'bebé de ellos'
 '*their baby*' <*d has h as part of family*> [H. Lyman (2007:18)]
- c. xkuidi' kie be'n yedxi
 ʃkuidi? kie be?n jeɟi
 children of person town
 'niños del pueblo'
 '*children of the townspeople*' <*d has h as part of family*> [H. Lyman (2007:18)]
- d. puerta kie yu'u
 puerta kie ju?
 door of house
 'puerta de la casa'
 '*door of the house*' <*d includes h as part of it*> [H. Lyman (2007:18)]

⁷H. Lyman (2007) actually analyzes and glosses /*kie*/ as a possessed noun. However, this word has grammaticalized in certain contexts (see H. Lyman (2007:26)) and is used in constructions other than the possessive construction. It may indicate the semantic role of an adjunct NP in a clause, for example. The examples from Ocotlán [zac] in (23) obviously have a word cognate with the word for 'possession' in Isthmus [zai], but the word in Ocotlán [zac] has a very broad usage and is apparently not used as a noun meaning '*possession*'.

- e. dxin ki a'
 ɕin ki(e) = a?
 work of 1SG
 'mi trabajo'
 'my work' <d performs h> [H. Lyman (2007:19)]
- (19) a. kway ni m
 [zpz] kwaj ni m
 horse of 3FO/3F
 'su caballo'
 'his/her horse' <d owns h> [Speck (1998:118)]
- b. mdo'o ni ma
 mdo' ni ma
 baby of 3AN
 'su bebé'
 'its baby' [of skunk]' <d has h as part of family> [Speck (1998:60)]
- c. fis ni areado'or
 fis ni areado'r
 work of traildriver
 'trabajo de arreador'
 'work of a traildriver' <d performs h as a job> [Speck (1998:14)]
- (20) nana ki' Betu
 [zaa] nānā kī? bētú
 mother of Pedro
 'madre de Pedro'
 'Pedro's mother' <d has kin relation h> [Bartholomew (1983:343)]
- (21) estado che Lla'
 [zav] estado tʃe la?
 state of Oaxaca
 'estado de Oaxaca'
 'State of Oaxaca' <d is the name given to an h> [Butler (1980:251)]
- (22) yu'u kie wichi
 [zpc] ju? kie witʃi
 house of excrement
 'excusado'
 'outhouse' <d is contained in h> [L. Lyman (f.n.)]
- (23) a. biche'zi xti gugi
 [zac] bitʃeʔzi ʃti gugi
 nest of turtledove
 'nido de la tortolita'
 'nest of the turtledove' <d considers h to be locus of typical residence> [Olson (n.d.)]

- b. bi xti gambani
 bi fti gambani
 sound of bell
 'sonido de la campana'
'sound of the bell' <d produces h> [Olson (n.d.)]
- c. kuerpi xti Bedi
 kuerpi fti bedi
 body of Pedro
 'cuerpo de Pedro'
'Pedro's body' <d has body part h> [Olson (n.d.)]
- d. bisini xti mbluri
 bisini fti mbluri
 piece of potsherd
 'pedazos de tepalcate'
'pieces of potsherd' <d is classified by h> [Olson (n.d.)]
- e. bandi xti estadi
 bandi fti estadi
 band of state
 'banda del estado'
'state band' <d is the administrative level of h> [Olson (n.d.)]
- f. lani xti María
 lani fti ma'ria
 party of María
 'fiesta de María'
'María's (birthday) party' <d celebrates h> [Olson (n.d.)]
- g. di xtini mbiugi
 di fti mbiugi
 poison of army.ant
 'veneno para arriera'
'army ant poison' <d is the intended victim of h> [Olson (n.d.)]
- h. xuni xti abril
 funi fti a'bril
 eight of April
 'ocho de abril'
'eighth of April' <d is the unit to which h belongs> [Olson (n.d.)]

- i. **tiemp*i* xti bikui'**chi
tiemp*i* ʃti bikuiʔtʃi
 time of spring
 'tiempo de primavera'
'springtime' <d is a type of h> [Olson (n.d.)]

The usage seen in examples like (21), where *d* is essentially the name of *h*, is apparently quite widespread. See appendix A.

Note that a possessive construction is not used in examples such as those in (24).

- (24) a. **mi Baki**
 [zac] **mi baki**
 person Tlacolula
 'habitantes de Tlacolula'
'inhabitants of Tlacolula' <d is inhabited by h> [Olson (n.d.)]
- b. **tubi girredi bikueli**
tubi giredi bikueli
 one wagon corn.husk
 'una carreta de totomostle'
'a wagonload of corn husks' <d is measured by h> [Olson (n.d.)]
- c. **du'pi⁸ zedi**
duʔpi zedi
 little.bit salt
 'un poco de sal'
'a little bit of salt' <d is measured by h> [Olson (n.d.)]
- d. **chupi klasi biadxi**
ʃupi klasi biadxi
 two kind plum
 'dos clases de ciruela'
'two kinds of plum' <d is categorized by h> [Olson (n.d.)]
- e. **laní Xmbabi**
la'ni ʃmbabi
 party San.Pablo
 'fiesta de San Pablo'
'festival of San Pablo' <d is the person associated with a particular h> [Olson (n.d.)]

The prepositional type indirect construction with a null head may also be used as an argument in at least some varieties, although this needs to be documented more. See examples (25)-(26).

⁸If this word is a quantifier, this example is not relevant. But the word class is in fact uncertain.

- (25) [[Chi a']].
 [zav] tʃi = a?
 of 1SG
 'Es mío.'
'It's mine.'

[Butler (2000:127)]

- (26) ʔNo'n nak [[chi o']].
 [zpq] noʔn n-ak tʃi = o?
 which.one? S-be of 2SG
 '¿Cuál es tuyo?' o '¿Cuáles son suyos?'
'Which is yours?' or 'Which are yours?'

[Long & Cruz (1999:420)]

4 Paraphrases between constructions

The two possessive constructions are in complementary distribution (if they coexist in a particular variety) since the choice between them depends on the kind of noun being possessed, as described above. In some varieties, paraphrases or near paraphrases are permitted in a few cases: the indirect construction with the simple noun and the direct construction with a derived possessed noun based on that same noun root. See examples (27)-(29). Note that when there is a semantic difference, the direct construction (based on the derived possessed noun) is the one which has a more specialized meaning.⁹

- (27) a. dxin ki a'
 [zpc] ɕin ki(e) = a?
 work of 1SG
 'mi trabajo'
'my work'

[H. Lyman (2007:19)]

- b. xchin a'
 ʃ-tʃin = a?
 POSS-work 1SG
 'mi trabajo'
'my work'

[H. Lyman (2007:19)]

- (28) a. di'idza' ki a'
 [zpc] di'ɕaʔ ki(e) = a?
 word of 1SG
 'mis palabras'
'my words'

[H. Lyman (2007:19)]

⁹This fact supports the derivational analysis of the possessive prefix presented in [Nouns, this series](#) over the more commonly presented inflectional analysis.

- b. xti'idz a'
 ʃ-ti'ɬ = a?
 POSS-word 1SG
 'mi lengua/idioma'
 'my language' [H. Lyman (2007:19)]
- (29) a. neza ki a'
 [zpc] neza ki(e) = a?
 road of 1SG
 'mi camino'
 'my road' [H. Lyman (2007:19)]
- b. xnez(a) a'
 ʃ-nez = a?
 POSS-road 1SG
 'mi manera de vivir'
 'my way of life' [H. Lyman (2007:19)]

5 Syntactic factors affecting constructions

In at least one variety the choice of construction is affected by syntactic factors that have not been presented in the sections above. In Sierra de Juárez Zapotec [zaa] the direct construction is used, as expected, in cases such as those in (30) in which an inherently possessed noun is the possessum.

- (30) a. ni'a Betu
 [zaa] nīʔā bêtú
 foot Pedro
 'pie de Pedro'
 'Pedro's foot' [Bartholomew (1983:354)]
- b. dana bi
 dānà = bī
 cross-sex.sibling 3INFO
 'su hermano de ella' o 'su hermana de él'
 'her brother' or 'his sister' [Bartholomew (1983:354)]

The facts are the same, in this variety, if the adjectives /bani/ 'right' or /jati/ 'left' immediately follow the possessum.¹⁰ See the examples in (31).

- (31) a. ni'a bani Betu
 [zaa] nīʔā bānī bêtú
 foot right Pedro
 'pie derecho de Pedro'
 'Pedro's right foot' [Bartholomew (1983:354)]

¹⁰Bartholomew (1983) is not absolutely explicit on whether it is possible or impossible to use the indirect construction in this situation in [zaa].

- b. ni'a yati Betu
 ni?ā jāti bètú
 foot left Pedro
 'pie izquierdo de Pedro'
 'Pedro's left foot'

[Bartholomew (1983:354)]

However, the interpolation of any other adjective between the possessum and the possessor (in this variety) in essence changes the construction from one headed by an inherently possessed noun to one that is possessed by a common noun, and so the indirect possession construction is required.¹¹

- (32) ni'a do' gi' Betu
 [zaa] ni?ā dó? Miles gi? bètú
 foot DIM of Pedro
 'piecito de Pedro'
 'Pedro's little foot'

[Bartholomew (1983:354)]

Similar facts are reported for Yareni [zae] (Grace Thiessen, p.c., 2009). The noun /zɔ/ 'clothes' is a possessed noun, as illustrated by the direct construction in (33).

- (33) zhro ri'i
 zɔ ri?
 clothes 1PLIN
 'nuestra ropa'
 'our clothes'

[Thiessen (f.n.)]

But when an adjective modifies the noun, the indirect construction is required, as shown in (34).

- (34) a. zhro yaxro ge ri'i
 [zae] zɔ jaʂo ge = ri?
 clothes old of 1PLIN
 'nuestra ropa vieja'
 'our old clothing'

[Thiessen (f.n.)]

- b. *zhro yaxro ri'i
 zɔ jaʂo = ri?
 clothes old 1PLIN
 'nuestra ropa vieja'
 'our old clothing'

[Thiessen (f.n.)]

The same is illustrated by the word for 'head' when it is modified by an adjective, as shown in (35).

¹¹Bartholomew (1983) gives only one adjective to illustrate this point, and that is the word identified as Diminutive. Note that the ungrammatical counterpart to example (32) is implied by the source: */ni?ā do? betu/ [zaa].

- (35) a. *iki lu*
 [zae] *iki = lu*
head 2SG
'tu cabeza'
'your head' [Thiessen (f.n.)]
- b. *iki do ge lu*
iki do ge = lu
head DIM of 2SG
'tu cabecita'
'your little head' [Thiessen (f.n.)]
- c. * *iki do ge lu*

As in Sierra de Juárez, a few adjectives are exceptionally allowed come between a possessed noun and a possessor in the direct construction in Yareni. These include /*bani*/ 'right' (literally, 'living'), /*jati*/ 'left' (literally, 'dead'), and /*dze*/ 'good'. In Yareni, however, the use of these adjectives is possible with the indirect as well as the direct construction, as illustrated by (36).¹²

- (36) a. *zhro dze ni*
 [zae] *zo dze = ni*
clothes good 3.POSS
'su buena ropa'
'his/her good clothing' [Thiessen (f.n.)]
- b. *zhro dze ge ni*
zo dze ge ni
clothes good of 3.POSS
'su ropa vieja'
'his/her old clothing' [Thiessen (f.n.)]

Facts similar to those of Yarenia and Sierra de Juárez have not been reported for other varieties.

6 Recursion

Recursion of the possessive construction is possible. In examples (37)-(39) a direct construction is embedded within a direct construction.

- (37) *lizh [xran [bo'o]] ni'*
 [zav] *liʒ ʃan boʔ niʔ*
house owner 3INFO AFM
'la casa de su patrón'
'the house of his/her employer/boss' [Butler (1980:44)]

¹²The third person pronoun in these examples is uncommon (in Zapotec) in that it has a different form when used as a verb argument (/na/) when used as a possessor (/ni/).

- (38) *yu'* [*mña'a* [*y*]]
 [zpz] *ju?* *mña?* *j*
 house wife 3M
 'la casa de su esposa'
'the house of his wife'

[Speck (1998:166)]

- (39) *durini* [*gia'* [*Pidi*]]
 [zac] *durini* *gia?* *pidi*
 vein foot Elpidio
 'vena del pie de Elpidio'
'vein of Elpidio's foot'

[Olson (n.d.)]

In examples (40) and (41) an indirect construction is embedded within an indirect construction.¹³

- (40) *yu'u* [*kie* [*kompadre* [*kie* [*ne'*]]]]
 [zpc] *ju?* *kie* *kompadre* *kie* = *ne?*
 house of co-parent of 3INFO
 'la casa de su compadre'
'his/her co-parent's house'

[H. Lyman (2007:188)]

- (41) *du* [*xti* [*mbibi* [*xti* [*ra* *zhgi'ni*]]]]
 [zac] *du* *fti* *mbibi* *fti* *ra* *3gi?ni*
 rope possession swing possession PL child
 'mecate del columpio de los niños'
'rope of the children's swing'

[Olson (n.d.)]

In example (42) an indirect construction is embedded within a direct construction.

- (42) *lu* [*mezhi* [*xtini* [*l*]]]
 [zac] *lu* *mezhi* *ftini* = *l*
 face table possession 2SG
 'mecate del columpio de los niños'
'rope of the children's swing'

[Olson (n.d.)]

And in (43) a direct construction is embedded within an indirect construction.

¹³The word /*ju?*/ in example (40) is unusual in a possessive construction within Zapotec generally since there is usually an inherently possessed noun for '*home*' that must be used. In Choapan [zpc], however, the cognate noun /*liɕi*/ is not used for the home of people, but prototypically for places where animals live. It is therefore not used for residences of people. See Lyman (dictionary, in preparation) where an example is also found in which it is used for the sheath of a machete. In Sierra de Juárez [zaa], one may say both /*ju?* *gi?* = *bi*/ (house of 3INFO) '*his/her house*' (using the indirect possession construction) and also /*litsi?* = *bi*/ (home 3INFO) '*his/her house/home*' (using the direct possession construction and the inherently possessed noun, Bartholomew 1983:343).

Regarding the term 'compadre' in Spanish (glossed as '*co-parent*' here), which is also used by Zapotec speakers: it refers to the people who share the reciprocal relationship between the parents and the godparents of the same child are referred to by .

- (43) a. liay [xti [rua' [yo'o]]]
 [zac] liaj ʃti ruaʔ joʔ
 key possession mouth house
 'llave de la puerta de la casa'
'key to the door of the house'

[Olson (n.d.)]

- b. dudi [xti [xni'a [zhgi'ni]]]
 dudi ʃti ʃniʔa ʒgiʔni
 breast possession mother child
 'seno de la madre del niño'
'breast of the child's mother'

[Olson (n.d.)]

7 Expressing 'his/her own'

Although there is no explicit reflexive possession construction, the idea of *'his/her own'* is sometimes expressed with the use of a certain word (glossed here as an intensifier — it has other uses) that precedes the possessor. This is shown in examples (44)-(47) .

- (44) bi'i che [kz bo']
 [zav] biʔ tʃe kz =boʔ
 child of INTNS 3INFO
 'su propio hijo/a'
'his/her own son/daughter'

[Butler (2000:96)]

- (45) benne' llo' yo'o che [z e']
 [zpq] ben:eʔ l:oʔ joʔ tʃe z =eʔ
 people in house of INTNS 3FO
 'su propia familia'
'his/her own family'

[Long & Cruz (1999:181)]

- (46) rolihʒ [pak ni]
 [zaw] roliʰz pak =ni
 home INTNS 3INFO
 'su propia casa'
'his/her own house'

[Stubblefield & Stubblefield (1991:49)]

- (47) lo [pak bi]
 [zab] lo pak =bi
 face INTNS 3INFO
 'su propia cara'
'his/her own face'

[Joaquín López, p.c.]

Apparently not all varieties have something analogous to this intensifier.¹⁴ See appendix A.

¹⁴The intensifier may also have some quirky features when the possessor is first person singular.

Some varieties also use a different kind of intensifier — one that appears before the possessum, as in (48)-(49), rather than before the possessor. See appendix A. The result may be interpreted in more than one way. See examples (48)-(49).

- (48) *lagak xlibr ib*
 [zab] *lagak ʃ-libr =ib*
 INTNS POSS-book 3INFO
 'su propio libro' o 'su mismo libro'
'his/her own book' or 'his/her very book' [Joaquín López, p.c.]

- (49) a. *Tsana gokbe'e n la'a gak xtu'ulaz na.*¹⁵
 [zpf] *tsana gokbeʔ =n laʔ gak ʃ-tuʔ-laz na*
 when C.understand 1PL FOC INTNS POSS-rope-? 1PL
 'Cuando nos dimos cuenta, era el mismo mecate de nosotros.'
'Then we realized it was our own rope.' [Martínez & Martínez (f.n.)]

- b. *Tohb orin gohn behn*
to^hb or-in go^hn be^hn
 one hour-DIM C.see person

la'a da xpē'ik behn ba nal behn.
laʔ da ʃ-pæʔik be^hn ba nal be^hn
 FOC INTNS POSS-dog person already S.follow person
 'Después de un ratito vio que su perro le seguía.'
'After a little while he_i saw that
his_i (own) dog was following him_i.' [Martínez & Martínez (f.n.)]

Of course, if the variety has more than one human pronoun (such as the formal or informal distinction), this fact may be relevant for making examples unambiguous. Isthmus [zai] is interesting in this respect since it has what has been described as a zero pronoun, which is used for an alternate character in the context (Marlett & Pickett 1996,2008). This device forces coreference when two zero pronouns are used in a clause, or two overt third person pronouns, as shown in (50).¹⁶

- (50) a. *Bedané be xi'iñi be.*
 [zai] *b-eda'ne =be zi'niʔ =be*
 C-bring 3INFO child 3INFO
 'Trajo_i a sui, *_j hijo/hija.'
*'She/he_i brought her/his_i, *_j child.'* [Marlett & Pickett (1996:129, 2008:7)]

¹⁵The part /laz/ of this compound might be related to *lazo* 'lasso' in Spanish; it also means 'braid'. The compound noun means a rope for tying bundles, etc. (Nicasio Martínez, p.c.)

¹⁶The final glottal stop on the word for 'child' does not appear when the word is not phrase-final.

- b. Bedané Ø xi'iñi' Ø.
 b-eda'ne = Ø zi'ni? = Ø
 C-bring 3AL child 3AL
 'Trajo_i a su_i, *_j hijo/hija.'
*'She/he_i brought her/his_i, *_j child.'* [Marlett & Pickett (1996:129, 2008:7)]

When the zero pronoun and the overt pronoun co-occur, they must have different referents, as shown in (51).

- (51) a. Bedané be xi'iñi' Ø.
 [zai] b-eda'ne = be zi'ni? = Ø
 C-bring 3INFO child 3AL
 'Trajo_i a su_{*i,j} hijo/hija.'
*'She/he_i brought her/his_{*i,j} child.'* [Marlett & Pickett (1996:130, 2008:7)]
- b. Bedané Ø xi'iñi be.
 b-eda'ne = Ø zi'ni? = be
 C-bring 3AL child 3INFO
 'Trajo_i a su_{*i,j} hijo/hija.'
*'She/he_i brought her/his_{*i,j} child.'* [Marlett & Pickett (1996:130, 2008:7)]

8 Predicative possession

The possessive constructions are used in predicate situations using an existential or locational verb. The examples in (52) have NPs with the indirect construction as the arguments of existential verbs.

- (52) a. [Chopa xkuidi' ki a'] nita'.
 tʃopa ʃkuidi? ki(e) = a? nita?
 two child of 1SG S.exist.PL
 'Tengo dos hijos.'
'I have two children.' <kin relation> [H. Lyman (2007:153)]
- b. ¿Bi de [za ki o']?
 bi de za ki(e) = o?
 not exist bean of 2SG
 '¿No tienes frijoles?'
'Don't you have any beans?' <temporary possession> [H. Lyman (2007:153)]

Similarly, direct construction possessives can be arguments of existential verbs, as in (53)-(55).

- (53) Niti' [xi zhrqeid a'].
 [zav] niti? ʃi zʁeid = a?
 S.exist.PL ten POSS.hen 1SG
 'Tengo diez gallinas.'
'I have ten hens.' <possession> [Butler (2000:215)]

- (54) ... ba benita' [chop zhreso(a) e'].
 [zpq] ba b-e-nita? tʃop zɛso =e?
 already C-FREQ-be.located two grandchild 3FO
 '... ya tiene dos nietos.'
 '... s/he already has two grandchildren.' <kin relation> [Long & Cruz (1999:206)]

- (55) [Xdyahl xkompaid behn] nu.
 [zpf] ʃdja^{h1} ʃ-kompaid be^hn nu
 many POSS-co-parent person S.exist
 'Tiene muchos compadres.'
 'S/he has many co-parents.' <social relation> [Martínez & Martínez (f.n.)]

Example (56) is slightly different in that the indirect possessive construction is clearly in apposition to another noun (/bi?/ 'child').

- (56) Zoa [to bi' [bil a']].
 [zav] zoa to bi? bil =a?
 S-be.located one child sister.FE 1SG
 'Tengo [una mujer] una hermana.'
 'I [a female] have a sister.' <kin relation> [Long & Cruz (1999:16)]

Not all varieties have such constructions with existential and locative verbs, however. See appendix A.

Some verbs also correspond to some of the types of possession. These include ownership, although in some cases the verb is vague between temporary possession ('have') and actual ownership ('own'). In examples (57)-(61), 's' refers to 'subject', 'o' refers to 'direct object', and 'l' refers to a 'locative adjunct'.

Possession of a common noun:

- (57) ʔPanda bi'ku' nap u'?
 [zai] panda bi?ku? n-ap(a) =u?
 how.many? dog S-own/have 2SG
 '¿Cuántos perros tienes/posees?'
 'How many dogs do you own/have?' <s owns o> [Pickett, Black & Marcial (2001:74)]

- (58) Rap Zhuan bargohl.
 [zpf] r-ap ʒuan bar-go^{h1}
 H-own/have Juana turkey-male
 'Juana tiene/posee un guajolote.'
 'Juana has/owns a turkey.' <s owns o> [Martínez & Martínez (f.n.)]

Having a body part (with inherently possessed noun):

- (59) Zhrban bgizi' ni' nsa'an zhrbizi' b
 [zav] zʔan bgizi? ni? n-sa?n zʔbizi? =b
 tail rattlesnake AFM S-have rattle 3AN
 'La víbora de cascabel tiene sonajas en la cola ...'
 'A rattlesnake's tail has rattles on it, ...' <s has body part o> [Butler (2000:305)]

- (60) a. Bliuni naki tichi mbeldi
[zac] bliuni n-aki tiŋi mbeldi
scale S-hang back fish
'El pescado tiene escamas.'
'A fish has scales.' <body part s occurs (hangs) on l> [Olson (n.d.)]
- b. Kachi zubi gik nguni
katŋi zubi gik nguni
horn S.sit head bull
'El toro tiene cuernos.'
'A bull has horns.' <body part s occurs (sits) on l> [Olson (n.d.)]
- c. Gia' mini napi ga'i bikuini.
gia' mini napi ga'i bikuini
hand person S.have five finger
'La mano de una persona tiene cinco dedos.'
'A person's hand has five fingers.' <s has part o> [Olson (n.d.)]
- d. Ga'i bikuini nua'a kadi tubi gia'a l.
gja' bikuini nua' kadi tubi gia' =1
five finger S-carry each one hand 2SG
'Cada mano tiene cinco dedos.'
'Each hand has five fingers.' <s has (carries) part o> [Olson (n.d.)]

Having a relative (with inherently possessed noun):

- (61) Karlos napi chopi bichi zh.
[zac] karlos n-ap ʈopi biŋi =3
Carlos S-have two brother.ME 3INFO
'Carlos tiene dos hermanos.'
'Carlos has two brothers.' <s has kin o> [Olson (n.d.)]

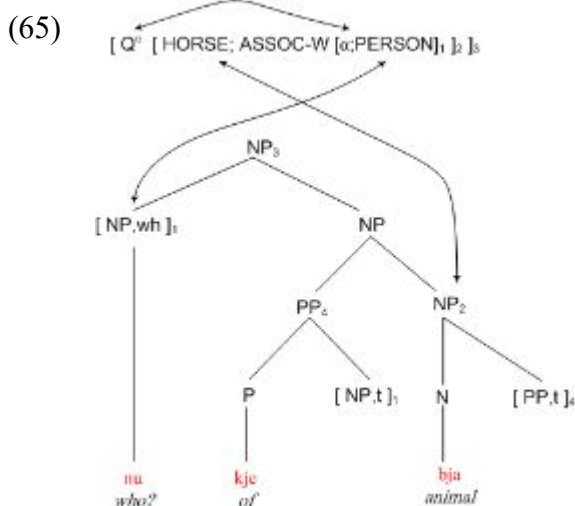
9 Interrogatives and possession

Content questions involve fronting, and questions that ask for the identity of a possessor are especially interesting. The interrogative pronoun meaning '*who*' comes first. If a linking word (see section 3) is used in the construction, that word follows the interrogative pronoun. The possessum comes next. This means, in effect, that the word order in a question with an possessor is just the opposite of the word order in a non-interrogative context. This is shown in examples (62)-(64). The ungrammatical examples illustrate that there is no possibility of not using this word order in this situation.

- (62) a. ʔNu kie bia zë na'?
[zpc] nu kie bia zæ na'
who? of animal S.stand there
'¿De quién es el animal que está parado allí?'
'Whose animal is standing there?' [H. Lyman (2007:173)]

- b. * ζ Nu bia kie zē na'?
- c. * ζ Kie nu bia zē na'?
- (63) a. ζ Cho che'en libr kua'an nzhib lo mes?
 [zpo] tʃo tʃe'n libr k^wa'n n-ʒib lo mes
 who? possession book thing S.placed face table
 'De quién es el libro que está en la mesa?'
 '¿De quién es el libro que está en la mesa?' [Riggs (1991:11)]
- b. * ζ Cho libr che'en kua'an nzhib lo mes?
- c. * ζ Che'en cho libr kua'an nzhib lo mes?
- (64) a. ζ Chu ni' ndek rien ra n?
 [zpf] tʃu ni? ndek r-jen r-a =n
 who? foot DIST H-be.seen H-see 1SG
 'De quién es el pie que veo?'
 'Whose foot do I see?' [Martínez & Martínez (f.n.)]

Such inversion of the possessor and the “pied-piping” of the preposition has been documented in numerous Mesoamerican languages (see Smith-Stark (1988), Eberhardt (1999), Black (2000), Broadwell (2001) with respect to languages within the Otomanguean family, for example). Various formal accounts of this interesting phenomenon have been presented. An attempt to present the interrogative phrase of example (62a) within one contemporary non-transformational framework, that of Culicover & Jackendoff (2005) (see p. 317, for example), is given in the figure in (65). This presentation links Conceptual Structure (the first line) with the Syntactic Structure.



I assume (but do not have evidence to present for it at this time) that the string /nu kje bja/ 'whose animal?' is a constituent in surface structure. Possible evidence would be examples to show that the words cannot be separated by other major constituents. We do know, however, that the intensifier /ʒi/ may follow (and modify) the question word /nu/ (H. Lyman 2007:180) as it may modify other question words.

I also assume (but do not have evidence to present for it at this time) that the string /*kje bja*/ is a constituent although the words /*nu kje*/ form a phonological word (Larry Lyman, p.c.).

Content questions with an interrogative possessor in a direct possession construction are also interesting in some varieties. Note that in the example in (66) the possessed pronoun is followed by a special third person pronoun.

- (66) *¿Nu gicho ge ba uchibi j ë'?*
 [zpc] *nu gitfo =ge ba utfibi x(a) =æ?*
who? head someone already C-shave PL 3FO
'A quién le rasuraron la cabeza?'
'¿Whose head did they shave?'

[H. Lyman (2007:36)]

This kind of special pronoun has not been reported for varieties other than Choapan [zpc], so far as I know. It is also interesting to note that it is also not used in Choapan when the indirect possessive construction is used.

- (67) *¿Nu kie yu'u niga?*
 [zpc] *nu kie ju' niga*
who? of house PROX
'De quién es esta casa?'
'¿Whose house is this?'

[H. Lyman (2007:42)]

10 Possessive pronouns

True possessive pronouns have not been documented in any variety. The noun-like linking word is often used without an overt head noun (see appendix A). In such cases it has been common to translate the possessed construction as a possessive pronoun in English and Spanish. See the examples in section 3.

What is expressed with a possessive pronoun in English or Spanish may also be expressed in another way in Zapotec, as example (68) illustrates. The possessor is included (attributively) in the noun phrase and not predicatively as a pronoun.

- (68) *¿E maky chi o' de'e ngan'?*
 [zav] *é mak^j tʃi =o? de? ngan?*
Q machine of 2SG thing PRON.PROX
'¿Es tuya esta máquina?'
'Is this machine yours?' More literally: 'Is this thing your machine?' [Butler (1980:113)]

11 Effect of the possessor on the subject

In some varieties a possessor of a nominal in a clause causes a coreferent subject to not be realized phonologically. The type of possessive construction (direct or indirect) is apparently irrelevant.

- (69) Gwdinni ___ yichq a'.
 [zav] g^w-din:i jitʃχ =aʔ
 C-comb head 1SG
 'Me peiné.'
'I combed my hair.'

[Butler (1980:296)]

- (70) Ba dxlab ___ llibr che bo'
 [zav] ba dʒ-lab libr tʃe =boʔ
 already H-read book of 3INFO
 'Ya está leyendo su (propio) libro.'
*'S/he_i is already reading her/his_{i*_j} book.'*

[Butler (1980:296)]

This construction is discussed in another paper (in preparation). See also Black (2000:72, 74).

Appendix A: Details about possessors

This table provides known information for all the Zapotec languages for the facts reported in this paper.¹⁷

ISO 639-3 code	Identifier as in Ethnologue	Linking word in indirect construction	Noun meaning 'possession' used as a simple head	Linking word in expression like 'sea of Galilee'	Existential verb plus possessed noun construction	Pre-possessor Intensifier	Pre-possessum Intensifier	Inversion with pied-piping if Q-Possessor?
zaa	Sierra de Juárez	giʔ		yes				yes
zab	San Juan Guelavía	ʃte(n) ¹⁸	ʃte(n) ¹⁹	yes		pak	lagak	yes
zac	Ocotlán	ʃti		—				
zad	Cajonos	ʃe						
zae	Yareni	ge		yes				
zaf	Ayoquesco							
zai	Isthmus	ʃtiʔ ²⁰	ʃtiʔ ²¹	no ?				yes
zam	Miahuatlán	ʃeʔn		no ?				
zao	Ozolotepec	ʃaʔn		yes				
zaq	Aloápam	ge		yes				
zar	Rincón	ke		yes				
zas	Santo Domingo Albarradas	(doesn't use) ?						
zat	Tabaa	ʃeʔ		yes				
zav	Yatzachi	ʃe		yes		kz		yes

¹⁷To give some content to the word “relatively” here for the context of column four: it occurs on at least 100 derived words and also occurs on loanwords. Pied-piping referred to in the last column is relevant only if there is a linking word, of course.

¹⁸The form without the /n/ occurs before an NP while the form with the /n/ occurs before pronouns.

¹⁹See note 18 regarding variation in pronunciation that is applicable to this word as well.

²⁰This word is pronounced /stiʔ/ by some speakers, and in appropriate contexts the final glottal is dropped. This variant is listed in Pickett (2007).

²¹See note 20 regarding variation in pronunciation that is applicable to this word as well.

ISO 639-3 code	Identifier as in Ethnologue	Linking word in indirect construction	Noun meaning 'possession' used as a simple head	Linking word in expression like 'sea of Galilee'	Existential verb plus possessed noun construction	Pre-possessor Intensifier	Pre-possessum Intensifier	Inversion with pied-piping if Q-Possessor?
zaw	Mitla	ʃten		yes		pak	laga^hk ²²	
zax	Xadani							
zca	Coatecas Altas							
zoo	Asunción Mixtepec							
zpa	Lachiguirí							
zpb	Yautepec							
zpc	Choapan	kíe	no?	possible	yes			yes
zpd	Southeastern Ixtlán							
zpe	Petapa							
zpf	San Pedro Quiatoni	(doesn't use)	(none)		yes		gak, da	
zpg	Guevea de Humboldt	ʃtʃien	ʃtʃien	no	yes	ga^hk ²³	□	yes
zph	Totomachapan							
zpi	Santa María Quiegolani	(doesn't use)	ʃen			ʒal	ke	yes
zpj	Quiavícužas							
zpk	Tlacolulita							
zpl	Lachixío							
zpm	Mixtepec	(doesn't use)		—				
zpn	Santa Inés Yatzechi	ʃteʔ						

²²This morpheme occurs before pronouns, but it also precedes the preposition in the case of an indirect object (**/laga^hk lo = æ/** 'to me (*emphatic*)'). See Stubblefield & Stubblefield (1991:205ff). It is an integral part of the reflexive construction as well.

²³Donna Kreutz (p.c.) points out that **/ga^hk/** is a complex form consisting of an intensifier and an enclitic meaning 'same'.

ISO 639-3 code	Identifier as in Ethnologue	Linking word in indirect construction	Noun meaning 'possession' used as a simple head	Linking word in expression like 'sea of Galilee'	Existential verb plus possessed noun construction	Pre-possessor Intensifier	Pre-possessum Intensifier	Inversion with pied-piping if Q-Possessor?
zpo	Amatlán	$\text{ʃtʃe}^{\text{?}}\text{n}$, $\text{tʃe}^{\text{?}}\text{n}$	$\text{ʃtʃe}^{\text{?}}\text{n}$, $\text{tʃe}^{\text{?}}\text{n}$ ²⁴	yes				yes
zpp	El Alto							
zpq	Zoogocho	tʃe		yes	yes	z		yes
zpr	Santiago Xanica							
zps	Coatlán							
zpt	San Vicente							
	Coatlán							
zpu	Yalálag	ke		yes				
zpv	Chichicapan	$\text{ʃte}^{\text{?}}\text{n}$:		yes				
zpw	Zaniza							
zpx	San Baltazar							
	Loxicha							
zpy	Mazaltepec							
zpz	Texmelucan	ni		yes				
zsr	Southern Rincón			yes				
zte	Elotepec							
ztg	Xanaguía	ʃten	ʃten				$\text{la}^{\text{?}}\text{g}$	yes
ztl	Lapaguía-Guivini							
ztn	San Agustín Mixtepec							
ztn	Santa Catarina Albarradas							
ztp	Loxicha							

²⁴The distribution of these two forms has not been investigated.

ISO 639-3 code	Identifier as in Ethnologue	Linking word in indirect construction	Noun meaning 'possession' used as a simple head	Linking word in expression like 'sea of Galilee'	Existential verb plus possessed noun construction	Pre-possessor Intensifier	Pre-possessum Intensifier	Inversion with pied-piping if Q-Possessor?
ztq	Quioquitani-Quierí	(doesn't use)	tʃen	—				
zts	Tilquiapan	(doesn't use)		—				
ztt	Tejalapan							
ztu	Güilá							yes
ztx	Zaachila							
zty	Yatee	tʃe	?					

References

- Bartholomew, Doris A. 1983. "Gramática zapoteca." In Neil Nellis & Jane G. Nellis, eds. *Diccionario zapoteco de Juárez*, 335-444. Mexico City: Instituto Lingüístico de Verano.
- Black, Cheryl A. 2000. *Quiégolani Zapotec syntax: A principles and parameters approach*. Dallas: SIL International and University of Texas at Arlington.
- Briggs, Elinor. 1961. *Mitla Zapotec grammar*. Mexico City: Instituto Lingüístico de Verano and Centro de Investigaciones Antropológicas de México.
- Broadwell, George A. 2001. "Optimal order and pied-piping in San Dionicio Zapotec." In Peter Sells, ed. *Formal and empirical issues in Optimality Theoretic syntax*, 197-223. Stanford: CSLI.
- Butler, Inez M. 1980. *Gramática zapoteca: zapoteco de Yatzachi el Bajo*. Mexico City: Instituto Lingüístico de Verano.
- Butler, Inez M., compiler. 2000. *Diccionario zapoteco de Yatzachi: Yatzachi el Bajo, Yatzachi el Alto, Oaxaca*. 2nd Edition. Tucson: Instituto Lingüístico de Verano.
<http://mexico.sil.org/resources/archives/51166>
- Culicover, Peter W. & Ray Jackendoff. 2005. *Simpler syntax*. Oxford: Oxford University Press.
- Dryer, Matthew S. 2008. "Position of pronominal possessive affixes." In Martin Haspelmath, Matthew S. Dryer, David Gil & Bernard Comrie, eds. *The World Atlas of Language Structures Online*, Chapter 57. Munich: Max Planck Digital Library.
<http://wals.info/feature/57>
- Eberhardt, Roy. 1999. "Questions and inversion in Ocotepec Mixtec." *Work Papers of the Summer Institute of Linguistics, University of North Dakota Session* 43:1-20.
- Huddleston, Rodney & Geoffrey K. Pullum. 2002. *The Cambridge grammar of the English language*. Cambridge: Cambridge University.
- Jones, Theodore. f.n. "Field notes on San Juan Guelavía Zapotec." SIL.
- Long C., Rebecca & Sofronio Cruz M., compilers. 1999. *Diccionario zapoteco de San Bartolomé Zoogocho Oaxaca*. Coyoacán D.F.: Instituto Lingüístico de Verano.
<http://mexico.sil.org/resources/archives/51213>
- Lyman, Larry. f.n. "Field notes on Choapan Zapotec." SIL.
- Lyman Boulden, Hilario. 2007. *Gramática popular del zapoteco de Comaltepec, Choapan, Oaxaca*. Mexico City: Instituto Lingüístico de Verano.
- Marlett, Stephen A. & Velma B. Pickett. 1996. "El pronombre inaudible en el zapoteco del Istmo." Zarina Estrada Fernández, Max Figueroa Esteva & Gerardo López Cruz. , eds. *III Encuentro de Lingüística en el Noroeste*. 119-150. Hermosillo, Sonora: Editorial Unison.
- Marlett, Stephen A. & Velma B. Pickett. 2008. "El pronombre inaudible en el zapoteco del Istmo." <http://mexico.sil.org/resources/archives/53052> (accessed March 3, 2009)
- Martínez, Nicasio and Valerie Martínez. f.n. "Field notes on San Pedro Quiatoni Zapotec." SIL.
- Nichols, Johanna and Balthasar Bickel. 2008. "Possessive classification." In Martin Haspelmath, Matthew S. Dryer, David Gil & Bernard Comrie, eds. *The World Atlas of Language Structures Online*, Chapter 59. Munich: Max Planck Digital Library.
<http://wals.info/feature/59>
- Olson, Donald. n.d. "Ocotlán Zapotec vocabulary." SIL. ms.
- Payne, Doris & Immanuel Barshi, editors. 1999. *External possession*. Amsterdam: John Benjamins.

- Pickett, Velma B. 1990. "Comparación de dos 'dialectos' zapotecos." In Beatriz Garza and Paulette Levy, eds. *Homenaje a Jorge A. Suárez: Lingüística indoamericana e hispánica*, 407-36. México: Colegio de México.
- Pickett, Velma B., compiler. 2007. *Vocabulario zapoteco del Istmo: español-zapoteco y zapoteco-español*. 5th Edition. Mexico City: Instituto Lingüístico de Verano.
<http://mexico.sil.org/resources/archives/35335>
- Pickett, Velma B., Cheryl Black & Vicente Marcial Cerqueda. 2001. *Gramática popular del zapoteco del Istmo*. 2nd Edition. Juchitán, Oaxaca and Tucson: Centro de Investigación y Desarrollo Binnizá and Instituto Lingüístico de Verano.
<http://mexico.sil.org/resources/archives/35304>
- Riggs, David B. 1991. *A comparative grammar of English for Zapotec speakers (Gramática comparativa inglés-zapoteco)*. M.A. thesis. Universidad de las Américas.
- Smith-Stark, Thomas C. 1988. "'Pied-piping' con inversion en preguntas parciales." Centro de estudios lingüísticos y literarios, Colegio de México y Seminario de lenguas indígenas. ms.
- Speck, Charles H., compiler. 1998. *Zapotec oral literature: El folklore de San Lorenzo Texmelucan*. Dallas: Summer Institute of Linguistics.
- Stubblefield, Morris & Carol Stubblefield. 1991. *Diccionario zapoteco de Mitla, Oaxaca*. Mexico City: Instituto Lingüístico de Verano.
- Thiessen, Grace. f.n. "Field notes on Western Ixtlán Zapotec." SIL.