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The Peñafiel Vocabulary from San Juan Elotepec

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This paper introduces and makes available the contents of a unique, previously unpublished nineteenth-century document in Elotepec Zapotec, an endangered and under-documented language of Mexico. The document forms part of the survey of Mexican indigenous languages undertaken by the Dirección General de Estadística de la República Mexicana in the 1880s and 1890s. The paper provides a transcription of the Elotepec Zapotec forms, a study of the document's orthography, and a linguistic analysis of the data.

1. Introduction

In the 1880s, Antonio Peñafiel Barranco, head of the newly founded Dirección General de Estadística de la República Mexicana, launched a far-flung, multiyear survey of the indigenous languages of Mexico.¹ The goal of the survey was to assemble basic, practical information about the languages in order to catalog them, determine their geographical distribution, assess their vitality and, in some cases, “consignar idiomas que no eran conocidos, como el cahuilla de la Baja California” [record languages that were not known, like Cahuilla from Baja California] (Peñafiel 1897: 93). The practical orientation of the survey was emphasized by Peñafiel in his report to the Eleventh Congress of Americanists, held in Mexico City in 1895:

No se quería la clasificación de las lenguas, ni concienzudos estudios de Filología, sino simplemente una recopilación, un catálogo general comparativo para aplicaciones útiles y prácticas (Peñafiel 1897: 92)²

The instrument that was used to survey the languages consisted of a numbered list of 250 lexical items in Spanish, which were to be translated into the various indigenous languages by local residents (Peñafiel 1897: 93). The thematic breakdown of this word list is given below in (1), and the list itself is given in the Appendix.

(1)	<u>Item</u>	<u>Category</u>
	1-3	religion
	4-24, 53-55	humans and kinship terms
	25-51	body parts
	52, 56-68	tools, dwellings and related terms
	69-101	natural environment, times of day, seasons, metals

¹ The exact beginning and end dates of the survey are unclear. Bright (1967) and Suárez (1972) both note that the dates of the Peñafiel vocabularies examined by them ranged between 1880 and 1894. Peñafiel, on the other hand, observed in his presentation to the Eleventh Congress of Americanists that assembling the vocabularies took him nine years (Peñafiel 1897: 92). The Dirección General de Estadística was founded in 1882; Peñafiel served as its general director for 28 years, beginning in 1883 (INEGI 2009: 20).

² “The purpose was neither classification of the languages nor painstaking philological study but rather a simple compilation, a general comparative catalog for functional and practical uses”.

102-151	plants, animals and related vocabulary
152-169	word for “name”; adjectives
170-180	pronouns and quantifiers
181-189	adverbs
190-211	cardinal numerals
212-240	verbs
241-250	abstract nouns

Given that the Peñafiel vocabularies were filled out by individuals who “had no previous experience in work of this kind”, they necessarily vary in quality and accuracy (Mechling 1912: 643). Though some have been used for linguistic research (e.g. Mechling 1912; Smith Stark 1999), only a fraction have been published, and Mechling’s observations below remain as accurate today as they were more than a century ago:

In the year 1886 Dr Antonio Peñafiel collected vocabularies of native languages from all parts of Mexico The volume of these vocabularies that has been printed deals entirely with the well-known Mexican of the Central Plateau region With the other four volumes into which Peñafiel divides his manuscripts nothing has been done, although it is hoped that they will soon be published by the Mexican Government. (Mechling 1912: 643)

Among the Peñafiel vocabularies that have not yet been published is the one from the Oaxacan town of San Juan Elotepec. The language recorded in the vocabulary, Elotepec Zapotec (ISO code *zte*), is only lightly documented in published sources, the only publications on this variety being an eighteen-page long *Breve noticia del idioma papabuco del pueblo de Elotepec* by Francisco Belmar (Belmar 1901) and an about twenty-page long article by Juan José Rendón (Rendón 1971). The latter researcher was unable to reach the town of San Juan Elotepec due to the rainy season and had to settle for conducting his fieldwork in the vicinity. Elotepec Zapotec is one of the three languages that form the Papabuco branch of Zapotec, the other two being Zaniza Zapotec (ISO code *zpw*) and Texmelucan Zapotec (ISO code *zpz*) (Speck 1978, 2005a, 2005b; Operstein 2015a, 2015b, 2016, 2017b). *The Ethnologue* reports Elotepec Zapotec’s intelligibility with Zaniza Zapotec as 68%, and with Texmelucan Zapotec as 10%; its most recently reported vitality level is 8a (“moribund”) (Eberhard et al. 2019).

In light of its severe level of endangerment and the critical dearth of published information, it is hoped that the data presented in this paper will provide a stimulus for undertaking fieldwork-based documentation of Elotepec Zapotec, as well as a basis for its inclusion in historical and comparative research on Zapotec. Since the Peñafiel vocabulary reflects the state of Elotepec Zapotec in the late 1880s, it also provides a unique dataset with which to observe linguistic change in a Zapotec language over the period of more than a century.

This paper is structured as follows. Section 2 provides a general description of the Peñafiel vocabulary from San Juan Elotepec. Sections 3 and 4 focus on the consonant and vowel inventories of Elotepec Zapotec, respectively, paying particular attention to the orthographic representation of the phonological contrasts. Section 5 looks at the morphological and syntactic features of Elotepec Zapotec that are reflected in the responses,

and section 6 examines the Spanish loanwords present in the data. Section 7 discusses the apparent errors and misunderstandings, as well as the Elotepec Zapotec responses that, for now, remain unanalyzed. Section 8 closes the paper with concluding remarks.

2. Peñafiel vocabulary from San Juan Elotepec

The Elotepec Zapotec vocabulary appears on the folios 656 through 659 of the manuscript that Suárez (1972: 231) lists in his bibliography under the title *Lenguas indígenas de Oaxaca* (Peñafiel 1880-1894). The document comprises eight photocopied pages and contains both printed and handwritten text. The centered printed heading close to the top of the title page states, in large block letters, “Dirección General de Estadística de la República Mexicana”, and is followed by another centered heading, in smaller block letters, “Instrucciones sobre la etnología y filología nacionales”. Underneath is a list of preliminary questions in italics and the following handwritten answers:

<i>Nombre del Estado</i>	Oaxaca = Lolá
<i>Id. del Municipio</i>	Agencia
<i>Id. del Pueblo</i>	San Juan Elotepec, Tieyé es Zuá
<i>Id. del idioma</i>	Zapoteeo Papabuco
<i>Id. del gentilicio en que se habla</i>	Entre Zapoteco y Chatino
<i>Nombre de la persona que escriba las palabras que corresponden á las castellanas escritas por orden numérico</i>	C. Lorenzo Salinas, soltero de 22 años, actual secretario del municipio
<i>Fecha y lugar en que se escribe la traduccion de este vocabulario</i>	

Immediately underneath is the centered heading “Vocabulario comparativo”, printed in block letters and followed by a numbered list of 250 lexical entries.

The handwritten part of the vocabulary evidences what appear to be three different hands. The answers to the preliminary questions above and the vocabulary responses all appear to be written by the same hand, presumably that of Lorenzo Salinas. The other two handwritings are confined to the title page. One is seen in the words “Oaxaca” and “Villa alvarez”, written close to the top of the page, and the other is responsible for the words “C. Presidente mpal de S. Juan Elotepec” on the very top of the page, and the word “Papabuco”, which is written twice, first next to and after crossing out Salinas’s response “Zapoteco” to the question *Id. del idioma* [name of the language], and then again above the printed heading “Vocabulario comparativo” (see Figure 1).³

In its top left-hand margin the title page bears an oval seal with the Mexican coat of arms and the words “Municipalidad S. Juan Elotepec” around its edge. The same seal is printed in

³ The fact that the person filling out the questionnaire identified the language as Zapotec, and not as Papabuco, is commented upon by Suárez (1972: 229), who also notes Belmar’s observation that, “in the administrative memory of 1873”, the language of San Juan Elotepec was called Zapotec rather than Papabuco (see Belmar 1901: 4).

the bottom left-hand margin of the last page, to the left of what appears to be Salinas's signature under two handwritten lines, which are not legible on my copy. Jorge Suárez, who did his research with the original Peñafiel manuscript, gave the date of the Elotepec Zapotec vocabulary as 1886 (Suárez 1972: 220, fn. 2 and 229).

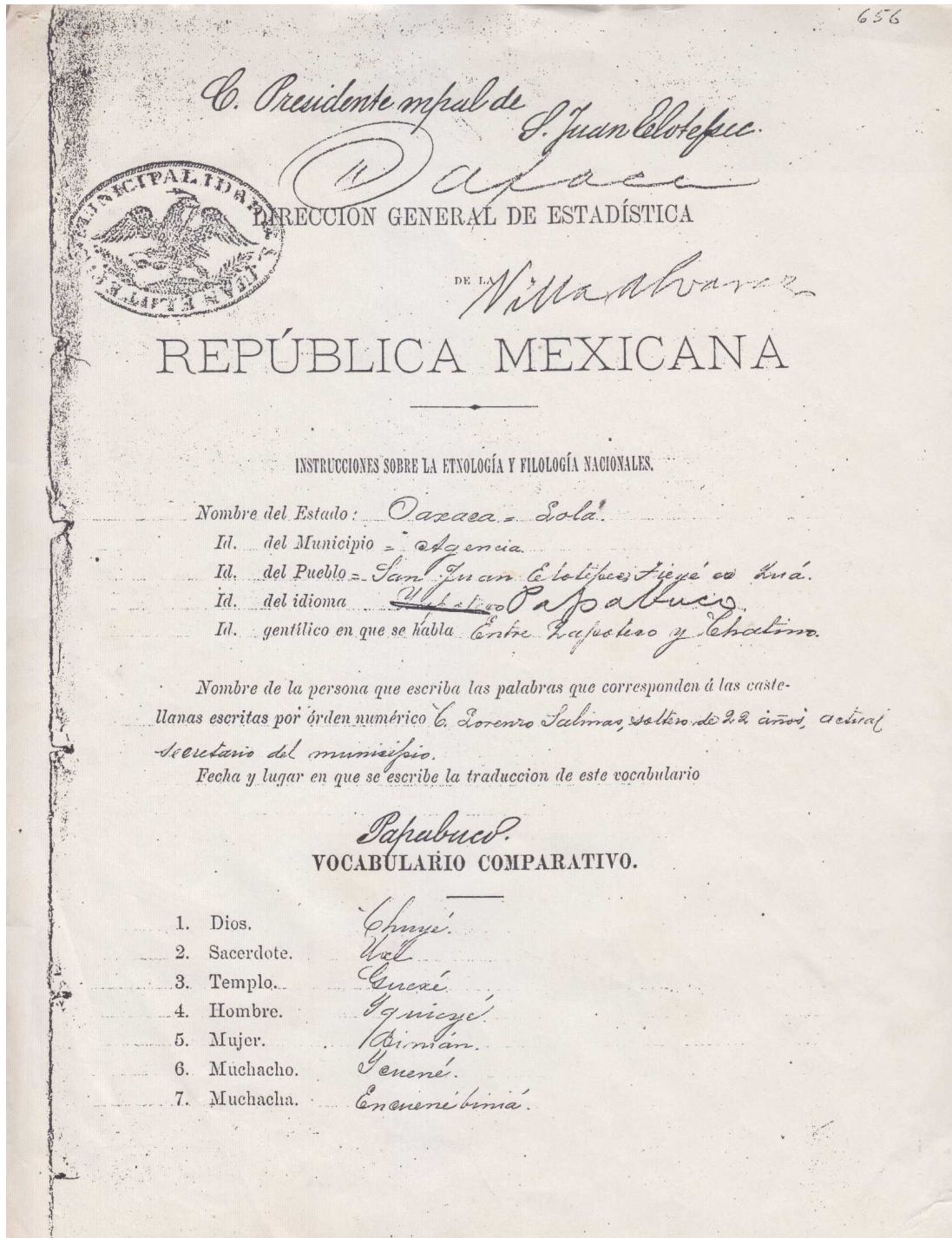


FIGURE 1. The title page of the Elotepec Zapotec vocabulary

3. Elotepec Zapotec consonants

The consonant inventory of Elotepec Zapotec which may be deduced from the orthography of the Peñafiel vocabulary, supplemented by Belmar's (1901) and Rendón's (1971) orthography and observations and a comparison with the other Papabuco languages, is shown in Table 1. The fricatives /f/ and /h/ are confined to Spanish borrowings; apparent distributional gaps in native words include non-occurrence of morpheme-initial /p/ and /ʒ/ and root-medial /k/, /k^w/ and /g^w/.

Table 1. Elotepec Zapotec consonants

p	t				k	k ^w	
b	d				g	g ^w	
	r			g'			
			tʃ				
			dʒ				
(f)	s	ʂ	ʃ				(h)
	z	z _v	ʒ				
m	n		ɲ				
	l		ʎ				
w			j				

The status of the consonant represented in Table 1 as /g'/ is unclear; this is one possible interpretation of the recurrent orthographic sequence <gui> ~ <qui> before <a> and <e> in the Peñafiel vocabulary (see Table 2).

Table 2. Elotepec Zapotec /g'/

Elotepec	Zaniza	Texmelucan	Proto-Zapotec ⁴	
<guiagua>	/dʒaaw/	/ʒoow/	*ke:ʔku	'river'
<quial(dó)>	/dʒal (doo)/	/ʒel/	*keʔla	'lake'
<quia(ná)>	/gi'/	/ji'/	*k-iʔja	'foot'
<guieté>	/get/	/jet/	*kettu	'squash'
<quieiyé>	/gej/	/jej/	*kijok	'rain'
<(y)quieyé>	/(i)gej/	/(ju) jeej/	*(k ^w e-) kiʔju	'man'
<(ez)quin(cazá)>	/(ʂi)gij/	/(tʃi)jij/	*(k ^w e-) kinni	'bird'
<guiñí>	/gij/	/jiij/	*ki:ʔnaʔ	'chili'
<quis(iquí)>	/giʂ/	/jitʃ/	*kittza(ʔ)	'hair'
<quid(labá)>	/gid (lab)/	/jid (lab)/	*kiti	'leather'
<quib(iagá)>	/gib (jag)/	/jib(ag)/	*ki:ʔk ^w a	'metal, iron'

⁴ Proto-Zapotec reconstructions are cited after Kaufman (2016). The symbols <ʔ>, <y>, <k^w> and <t> have been replaced with <ʔ>, <j>, <k^w> and <t'>, respectively.

Interpreting the orthographic sequence <gui> ~ <qui> before the vowels <a> and <e> as a single segment is suggested by the outcomes in the other Papabuco languages, Rendón's (1971) use of the digraphs <gy> (<gya7a¹N> 'foot') and <ky> (<kye¹ye> 'rain') (226, 228), and Belmar's (1901) use of <gui> before <a> and <e> in such forms as <(gal)guiaa> 'height', <(ru)guiao> 'river mouth', <guier(guiñi)> 'candle', <(ita)guieye> 'hail', <guieche> 'hole', <guiee> 'deep', <guieshe> 'town' and <ki> in <kieshe> 'thorn' and <kiete> 'squash'. Since the Peñafiel vocabulary does not mark palatalization before <i> (see 'bird', 'chili', 'hair', 'leather' and 'metal, iron' in Table 2), the orthographic <gu> ~ <qu> in that environment is interpreted as /g/.

Table 3 illustrates the occurrence of Elotepec Zapotec consonants other than /g'/ in initial and medial positions. The Elotepec forms are transcribed in IPA and, where applicable, divided into morphemes. The morphemes in the Elotepec responses that are not anticipated by the corresponding Spanish language prompts, such as the clitic first person plural pronoun *-na*, are enclosed in brackets.

Table 3. Examples of Elotepec Zapotec consonants

/p/	/tapa/ <tapa>	'four'	/ʃ/	/ʃona/ <zosná>	'three'
	/fopa/ <llopa>	'six'		/gʃi ru(-na)/ <quisi runá>	'beard'
/b/	/bi/ <viy>	'wind'	/z/	/zini/ <lliní>	'deer'
	/oba/ <obá>	'corn'		/weze/ <guexé>	'church'
/t/	/tibi/ <tibi>	'one'	/j/	/fopa/ <llopa>	'six'
	/riti/ <riti>	'bone'		/kuʃ giʃe/ <cusquillé>	'wild boar'
/d/	/do/ <dó>	'sea'	/z/	/dʒuʒe/ <chuyé>	'God'
	/bada/ <badá>	'duck'		--	--
/k/	/kola/ <cola>	'turkey'	/h/	/hefe-sõ/ <jefeson>	'boss'
	/beko/ <beco>	'dog'		--	--
/g/	/ga/ <gá>	'nine'	/m/	/mil/ <mil>	'thousand'
	/jaga/ <lliagá>	'wood'		/en-mi/ <enmihí>	'small'
/k ^w /	/k ^w ir(-ã)/ <cuirán>	'leg'	/n/	/nisi/ <nisi>	'water'
	/i-k ^w ene/ <ycuené>	'boy'		/kano(-re)/ <canoré>	'trough'
/g ^w /	/g ^w i il(-re)/ <cuilré>	'star'	/ɲ/	/ɲer jɲa/ <nierriñá>	'neck'
	/i-g ^w i(-na)/ <higuiná>	'see'		/bapa/ <baña>	'horse'
/tʃ/	/tʃo/ <chó>	'forty'	/r/	/riti/ <riti>	'bone'
	/betʃe/ <beché>	'people'		/uraga/ <uraga>	'dove'
/dʒ/	/dʒuʒe/ <chuyé>	'God'	/l/	/lede/ <ledé>	'bark'
	/gedʒe/ <gueché>	'seven'		/bala/ <balá>	'meat'
/f/	/fletʃe-sõ/ <fleche essón>	'arrow'	/ʎ/	/ʎaga/ <leagá>	'leaf'
	/hefe-sõ/ <jefeson>	'boss'		/ʎag(-re)/ <liagré>	'grass'
/s/	/solteré/ <solteré>	'young'	/w/	/weze/ <guexé>	'church'
	/nisi/ <nisi>	'water'		/g'awa/ <guiagua>	'river'
/z/	/zede/ <zedé>	'salt'	/j/	/ju/ <yuhú>	'house'
	/uze/ <uxé>	'priest'		/beje/ <beyé>	'moon'

The orthographic representation of Elotepec Zapotec consonants in the Peñafiel vocabulary is based on Spanish orthographic conventions, including representation of velar stops by means of <qu>, <gu> or <c>, <g> depending on whether the following vowel is front or back, the use of both and <v> to spell /b/, and an occasional silent <h>. Innovative uses of Spanish orthographic devices are found in the representation of Elotepec sounds that do not occur in Spanish; some of these, like the use of <y> for palatal fricatives, may have been inspired by pronunciations current in local (as opposed to normative) Spanish (see, e.g., Alvar 1965-1966: 360-362 on *rehilamiento*, or fricative realizations of /y/, spelled <y>, <ll>, in Oaxacan Spanish). Interpretation of the surface phonetics of some of the spellings is helped by comparison with Zaniza and/or Texmelucan Zapotec cognates.

The greatest challenge for the transcriber was posed by the multiple coronal fricatives of Elotepec Zapotec (see Table 4). In some cases, the same grapheme or digraph is used for spelling different fricatives; for example, <x> stands for /z/ in <uxé> ‘priest’, /z/ in <guexé> ‘church’ and /ʃ/ in <xilquité> ‘(rain)bow’. In other cases, the same fricative receives multiple orthographic representations; for instance, /z/ is represented by <x> in <uxé> ‘priest’, by <s> in <usanré> ‘my father’ and by <z> in <zedé> ‘salt’. The different orthographic solutions may be found even for the same morphemes, compare <bizná> (/biz-na/) ‘fingers’ with <bişilná> (/biz-il-na/) ‘thumb’ or the spelling of the animacy prefix in <esquinloyec> ‘bird’, <esquienú> ‘mosquito’, on the one hand, and <ezquincazá> ‘crow’, <ezquiegué> ‘fly’, on the other. All the native fricatives are thus orthographically under-distinguished, both with respect to their place of articulation and with respect to voicing (or, more accurately, their distinction along the fortis/lenis dimension, partially realized through voicing) (Nellis & Hollenbach 1980; Avelino 2001; Pickett et al. 2010; Operstein 2016). The velar and labiovelar stops, and the affricates are also under-distinguished with respect to the fortis/lenis distinction (voicing); for example, <ch> is used for /tʃ/ in <cho> ‘forty’ and <beché> ‘people’ (cf. /tʃu/, /mbetʃe/ in Zaniza Zapotec) and for /dʒ/ in <chuyé> ‘God’ and <gueché> ‘seven’ (cf. /dʒuz/, /gadʒ/ in Zaniza Zapotec).

Table 4. Orthographic representation of Elotepec Zapotec consonants

/p/	<p>			
	<tapa> ‘four’			
/b/		<v>		
	<beyé> ‘moon’	<viy> ‘air’		
/t/	<t>			
	<tiñia> ‘nose’			
/d/	<d>			
	<do> ‘sea’			
/k/	<c>	<qu>		
	<cola> ‘turkey’	<quisiquí> ‘hair’		
/g/	<g>	<qu>		
	<gá> ‘nine’	<quisiquí> ‘hair’		
/g’/	<gi>	<qui>	<gui>	
	<tiomgieyé> ‘spring’	<quieiyé> ‘rain’	<guiagua> ‘river’	

/k ^w /	<cu>	<qu>		
	<cuirán> ‘leg’	<xilquité> ‘bow’		
/g ^w /	<cu>			
	<cuiilré> ‘star’			
/t/	<r>	<rr>		
	<riti> ‘bone’	<nierrieñá> ‘neck’		
/tʃ/	<ch>			
	<chó> ‘forty’			
/dʒ/	<ch>			
	<chuyé> ‘God’			
/s/	<s>	<ss> (?)	<c>	
	<encasa> ‘black’	<fleche essón> ‘arrow’	<bilñici> ‘water snake’ ⁵	
/z/	<x>	<s>	<z>	
	<uxé> ‘priest’	<brisi> ‘squirrel’	<zede> ‘salt’	
/ʃ/	<x>	<ll>	<y>	
	<xilquité> ‘bow’	<llopa> ‘six’	<heryímmá> ‘to bark’	
/ʒ/	<y>			
	<chuyé> ‘God’			
/ʂ/	<s>	<z>	<ll>	
	<cusquillé> ‘wild boar’	<zosná> ‘three’	<billi> ‘rabbit’ ⁵	
/z/	<s>	<z>	<ll>	<y>
	<billisi> ‘pine’	<rezná> ‘to shout’	<lliná> ‘day’	<tiguyé> ‘town’
	<x>	<xh>	<ch>	
	<guexé> ‘church’	<chixhé> ‘coati’	<chixhé> ‘coati’	
/f/	<f>			
	<jefeson> ‘boss’			
/h/	<j>			
	<jefeson> ‘boss’			
/m/	<m>			
	<mil> ‘thousand’			
/n/	<n>			
	<nisi> ‘water’			
/ɲ/	<ñ>	<ñi>	<ni>	<nn>
	<baña> ‘horse’	<reñie> ‘blood’	<binián> ‘woman’	<beigidebesinnís> ‘bat’
	<nñ>	<ny>		
	<bixinñí> ‘mouse’	<tenyia> ‘bad’		
/l/	<l>	<ll>		
	<ledé> ‘bark’	<heita illi> ‘stone, rock’		

⁵ See section 7 regarding this form.

/k/		<le>		
	<liagré> ‘grass’	<leagá> ‘leaf’		
/w/	<gu>	<qu>	<u>	<hu>
	<guexé> ‘church’	<tieonquasá> ‘fall’	<tabaueré> ‘tobacco’	<huillé> ‘afternoon’
/j/	<y>	<hi>	<i>	<lli>
	<yu> ‘earth’	<hianá> ‘hand’	<nierrieñá> ‘neck’	<lliagá> ‘wood’

Given the relatively small number of the Elotepec forms containing the fricatives and the variety of the orthographic solutions, interpreting the surface phonetics of the spellings necessitates a comparative approach. A comparison of the Elotepec responses with their Zaniza and Texmelucan Zapotec cognates (see examples in Table 5) makes it likely that Elotepec distinguishes both voiceless (fortis) and voiced (lenis) coronal fricatives at three places of articulation.

Table 5. Elotepec Zapotec fricatives

Elotepec	Zaniza	Texmelucan	
/s/	/s/	/s/	
/-sil-/	/siʎ/	/siiʎ/	‘breakfast’
/nisi/	/nis/	/nis/	‘water’
/z/	/z/	/z/	
/zede/	/zed/	/zed/	‘salt’
/uzé/	/uz/	/uz/	‘father, priest’
/ʃ/	/ʃ/	/ʃ/	
/ʃopa/	/ʃup/	/ʃuup/	‘six’
/kuʂ giʃe/	/kuʂ giʃ/	/kutʃ ʒiʃ/	‘wild boar’
/ʒ/	/ʒ/	/ʒ/	
/dʒuʒe/	/dʒuʒ/	/ɲʒooʒ/	‘God’
/giʒe/	/giʒ/	/ʒiʒ/	‘straw’
/ʂ/	/ʂ/	/tʃ/	
/ʂona/	/ʂun/	/tʃon/	‘three’
/giʂi/	/giʂ/	/ʒitʃ/	‘hair’
/zʎ/	/zʎ/	/dʒ/	
/zizʎe/	/zizʎ/	/dʒiidʒ/	‘coati’
/wezʎe/	/ju' wezʎ/	/ju' wedʒ/	‘church’

Another area in which the Peñafiel vocabulary apparently provides a less than accurate representation of the data are word-initial sequences consisting of a lenis stop preceded by a homorganic nasal. While pre-stop nasals are not written in the Elotepec responses, their existence in the cited forms is likely in view of the cognates shown in Table 6 and the description in, as well as the forms <mbetche> ‘people’ and <ngo> ‘egg’ cited by, Rendón (1971: 216, 224, 225). Based on the evidence of their cognates in Zaniza and Texmelucan Zapotec, the last two forms in Table 6, <niaré> /pare/ ‘husband’ and <nierrieñá> /nerjepa/ ‘throat’, apparently derive their initial /ɲ/s from the earlier sequence [ɲg].

Table 6. Homorganic nasal-stop sequences in Elotepec Zapotec

Elotepec Zapotec	Zaniza Zapotec	Texmelucan Zapotec	
<beché>	/mbetʃ/	/mbec/	‘people’
<biz>	/mbiz/	/mbiz/	‘finger’
<go>	/ŋgu/	/ŋguu/	‘egg’
<niaré>	/ŋge/	/ŋʒee/	‘husband’
<nierriéñá>	/ger jɛɲ/	/ʒɛɲjɛɲ/	‘throat’

Zaniza and Texmelucan Zapotec both display stress-conditioned split of Proto-Zapotec *t', which has produced the tap before, and a palatal obstruent after, lexical stress (Table 7; see Operstein 2012). The presence in the Peñafiel vocabulary of forms like /riti/ ‘bone’ (<riti>), /reɲe/ ‘blood’ (<reñié>) and /ru/ ‘mouth’ (in <runá>), on the one hand, and of /gedʒe/ ‘seven’ (<gueché>), on the other, along with the forms like <ru> ‘mouth’, <ree> ‘jug’ (<*t'eʔe>), <nichi> ‘milk’ (<*ni:ʔt'iʔ>) and <richi> ‘laugh’ (<*o-xit'i>) recorded by Belmar (1901), appear to point to the same types of outcomes of Proto-Zapotec *t' in Elotepec Zapotec.

Table 7. Stress-conditioned split of Proto-Zapotec *t' in Zaniza and Texmelucan Zapotec

Proto-Zapotec	Pre-stress		Post-stress	
	Zaniza	Texmelucan	Zaniza	Texmelucan
*t'oʔwa ‘mouth’	/ru/	/ru/		
*t'ene ‘blood’	/reɲ/	/reɲ/		
*kkoʔt'V(k) ‘leg, thigh’			/k ^w idʒ/	/k ^w iij/
*kat'i ‘seven’			/gadʒ/	/gaj/
*ke:ʔt'u ‘hole’	/ger/	/ʒɛr/	/gedʒ/	/ʒeeɲ/
*laʔt'iʔ ‘center of emotions’	/lar/	/lar/	/ladʒ/	/laj/

The last two examples in Table 7 illustrate the difference in the outcomes of root-medial *t' depending on whether the nouns are used alone (in which case *t' was in a post-stress position) or as initial constituents of compounds (in which case *t' was in a pre-stress position). The Peñafiel vocabulary contains Elotepec cognates to several of the Zaniza and Texmelucan Zapotec nouns with this type of allomorphy (see Table 8). Unexpectedly, the Elotepec word for ‘heart, breast’ has what appears to be a stop in the bound form (<lec->) and a tap in the free form (<lere>); the word for ‘leg, thigh’ (<cuir(án)>) similarly has a tap (compare with the forms in Table 7). Possible explanations for the presence of the tap in the free forms of these nouns include borrowing and generalization of the pre-stress allomorph.

Elotepec	Zaniza	Texmelucan	
<lere>, <ler(án)>, <ler(ná)>, <lec(binián)>	/ladʒ/ ~ /lar/	/laj/ ~ /lar/	‘heart, breast’
<nierr(ieñá)>	/gedʒ/ ~ /ger/	/ʒeeɲ/ ~ /ʒɛr/	‘hole’
<ur(loná)>, <ur(sá)>	/udʒ/ ~ /ur/	/uuj/ ~ /ur/	‘fruit; pit, stone, seed’
<berlabá>	/bidʒ/ ~ /biɲ/ ~ /ber/	/biɲ/ ~ /bir/	‘frog; toad’

The orthography of the Peñafiel vocabulary reflects place assimilation in nasals, as seen in the variable spelling of the prefixes in (2).

- (2) <enhili> ‘big’ <eññan> ‘red’
 <encuenébiniá> ‘girl’ <embedo> ‘child’

Several words in the Peñafiel vocabulary present final consonants not found in their cognates in Zaniza or Texmelucan Zapotec, or in the forms collected by Belmar (1901) (see Table 9). The source of these consonants and their function, if any, are unclear, and their presence clashes with the strong tendency otherwise seen in Elotepec to end words in vowels, cf. the paragogic [e] in the Spanish loanword /dʒuʒe/ ‘God’ (< Sp. *dios*).⁶ There are also unexplained coda consonants in <zecto> ‘far’ and <zosná> ‘three’, unless these are typographical errors for <zeeto> and <zoná>, respectively (cf. /zet/, /ʃun/ in Zaniza and /zet/, /tʃon/ in Texmelucan Zapotec).

Table 9. Final consonants in Elotepec Zapotec

Elotepec (Peñafiel)	Elotepec (Belmar)	Zaniza	Texmelucan	
<chís>	<chii>	/tʃi/	/tii/	‘ten’
<beigidebesinnís>	<beguitbiziñe>	/be'jgid bizij/	/biʒid/, /bzij/	‘bat’
<guinec>	<uñie>	/uɲe/	/gunẽ/ ~ /guanẽ/	‘scorpion’
<chumdec>	<chuun>	/tʃuɲ/	/cu/	‘who’
<esquinloyec>		/ʃigij/	/tʃiʒij/	‘bird’
<gansex>				‘goose’

4. Elotepec Zapotec vowels

The vowel qualities represented in the responses to the Peñafiel questionnaire are /a e i o u/. The description of Elotepec vowels in Belmar (1901: 4) confirms the existence of five vowel qualities, while Rendón (1971: 216) tentatively adds an [ɛ] (“probablemente *E*, palatal-baja-abierta” [probably *E*, palatal-low-open]), using it to transcribe the word <Ire> ‘heart’. Variation in the spelling of what appears to be underlying /i/ in the linking element <bi> ~ <rebi> in numerals, and in unstressed initial syllables elsewhere, points to the existence of surface variation in the realization of this vowel (see (3)). The same inference may be drawn from comparing the spelling of one of the animacy-marking prefixes across our sources, transcribed with an <i> in Rendón (1971) (<i¹SSki³ni> ‘bird’) and an <e> in the Peñafiel vocabulary (<esquinloyec> ‘bird’, <ezquiegué> ‘fly’).

- (3) <chibitubi> ‘eleven’ <chibeechopa> ‘twelve’
 <quionrebichí> ‘seventy’ <galreechí> ‘thirty’
 <bixinñí> ‘mouse’ <beigidebesinnís> ‘bat’
 <yta quieye> ‘snow’ <heita illi> ‘stone, rock’
 <heitaquibiora> ‘gold’

⁶ A reviewer suggests that the final <c> may represent a glottal stop or checked vowel.

que llevan cierre glotal suave intermedio” [In addition to these simple vowels we find a series of rearticulated ones which have a gentle glottal catch in the middle]). He also mentions vowel nasalization but is unsure of its status: “únicamente la encontramos en ambientes nasales y al final de nombres poseídos y de verbos que se refieren a la primera persona del singular” [we find it only in nasal contexts and at the end of possessed nouns and verbs that refer to the first person singular] (217). The compiler of the Peñafiel vocabulary marks nasality by means of a <n> after, more rarely both before and after, the vowel; length by repeating the vowel; and laryngealization by means of an <h> between two identical vowels,⁸ and possibly also by repeating the vowel (see Table 11). The laryngealization contrast is directly reflected in the minimal pair <yú> ‘land’ / <yuhu> ‘house’. Vowel length and nasalization apparently co-occur when a vowel-final stem is followed by the first-person singular clitic pronoun /-ã/ (see the words ‘(my) ear’, ‘(I) walk’ and ‘(I) stand (up)’ in Table 11).

Table 11. Vowel length, nasality and laryngealization in Elotepec Zapotec

<ruu>	[ru:]	‘you (sg.)’	length (phonetic)
<naá>	[na:]	‘today’	
<encaá>	[enka']	‘sky-blue’	laryngealization
<yuhú>	[ju']	‘house’	
<enmihi>	[enmi']	‘small’	
<eñnan>	[eɲnã]	‘red’	nasalization (phonetic)
<aan>	[ã:]	‘I’	nasalization (phonemic)
<ydagaán>	[idagã:]	‘(my) ear’	
<binián>	[biɲã]	‘(my) wife’	
<usanré>	[uzãre]	‘(my) father’	
<ysoban>	[izobã]	‘(I) sit down’	
<zanán>	[zã:]	‘(I) walk’	
<guasonón>	[wasõ:]	‘(I) stand (up)’	

A puzzling feature of the Peñafiel orthography is the acute accent mark on most final vowels. According to Rendón (1971: 217), Elotepec words of more than one syllable are generally stressed on the penult; accordingly, in such words the accent mark does not show the location of stress. The same applies to words in which the accent mark is placed on a clitic, such as the deictic <-ré> or the enclitic first person pronouns <-án> and <-ná>.⁹ The location of the accent mark coincides with that of stress only in certain types of words, such as monosyllabics, compounds whose final constituent is monosyllabic and disyllabic words beginning with a prefix (see Table 12). It is possible that in some of the words the acute accent indicates tone (according to Rendón (1971: 216), Elotepec Zapotec has four contrastive tones and a “posible tono neutro”), though such interpretation leaves open the question why the tones on all other vowels, including stressed vowels, are ignored. In the

⁸ The use of <VhV> for representing laryngealized vowels has a long history in Zapotec writing (cf. Smith Stark 2003: 209-210).

⁹ Cf. in Isthmus Zapotec: “Stress does not occur on the prefix of a word. Enclitic pronouns are never stressed. The plural morpheme is a proclitic [...]; it is never stressed” (Pickett et al. 2010: 369).

absence of a clear explanation for its presence, the acute accent on final vowels may perhaps be seen as an orthographic flourish that helps to mark the end of a word.

Table 12. Acute accent mark in the Peñafiel vocabulary

Acute accent mark coincides with the location of stress		Acute accent mark does not coincide with the location of stress	
<yú> ‘land’	<quialdó> ‘lake’	<uxé> ‘priest’	<usanré> ‘(my) father’
<dó> ‘sea’	<ytó> ‘dead’	<galá> ‘twenty’	<cuirán> ‘(my) leg’
<gá> ‘nine’	<encaá> ‘sky-blue’	<enquesé> ‘yellow’	<loná> ‘(our) face’
<chó> ‘forty’	<binián> ‘(my) wife’	<yquieyé> ‘man’	<dalná> ‘(we) dance’

Zapotec languages vary with respect to their treatment of unstressed final vowels, with some varieties keeping them intact and others displaying various degrees of vowel weakening (Uchihara 2016). Papabuco displays the full range of possibilities in this respect: while in the Peñafiel vocabulary the final vowels are kept, at least in the citation forms, in Zaniza Zapotec they neutralize to an [a]-quality vowel in citation and pre-pausal forms and are dropped elsewhere, and in Texmelucan Zapotec they are lost (see Table 13).

Table 13. Posttonic vowels in Papabuco

Elotepec	Zaniza	Texmelucan	
<uxé>	/uz(a)/	/uz/	‘father, priest’
<ledé>	/lad(a)/	/lad/	‘bark’
<quieté>	/get(a)/	/jet/	‘squash’
<nisi>	/nis(a)/	/nis/	‘water’
<riti>	/rit(a)/	/rit/	‘bone’
<bixinñí>	/bizip(a)/	/bizip/	‘mouse’
<obá>	/ub(a)/	/uub/	‘corn’
<leagá>	/ʎag(a)/	/ʎag/	‘leaf’
<guiagua>	/dʒaaw(a)/	/joow/	‘river’
<beco>	/beh ^w (a)/	--	‘dog’

Several kinds of evidence in the Peñafiel vocabulary point to the weakening of posttonic vowels in Elotepec Zapotec. For example, there is only a handful of words with an unstressed final /o/ or /u/, limiting the inventory of posttonic vowels. In several Spanish loans, the unstressed final vowel of the Spanish word has been adapted as [e] (see 5). Since [e] is also used as a paragodic vowel in <chuyé> /dʒuzɛ/ ‘God’ (< Sp. *dios*), this argues for the default status of final [e], a state of affairs reminiscent of posttonic vowel neutralization in Zaniza Zapotec.

(5)	<u>Spanish</u>	<u>Elotepec Zapotec</u>	
	soltero	<solteré>	‘young (man)’
	tabaco	<tabaueré>	‘tobacco’
	tiempo	<tiemné>	‘time’
	flecha	<fleche essón>	‘arrow’

ganso	<gansex>	‘goose’
dios	<chuyé>	‘God’

Several nouns in the Peñafiel vocabulary have two allomorphs distinguished by the presence versus absence of the posttonic vowel. The full forms typically appear as standalone responses to the Spanish-language prompts, whereas the vowelless forms are found before clitics or second constituents of compounds (see Table 14). Preservation of the final vowel in ‘stone, rock’, which is stressed, despite the noun’s use as the initial member of several compounds, confirms that only unstressed final vowels are deleted in this environment (see 6).

Table 14. Loss of posttonic vowels in Elotepec Zapotec

	Full form	Vowelless form
‘twenty’	[gala] <galá> ‘twenty’	[gal-rebi-tʃi] <galrebechí> ‘thirty’
‘leaf, grass’	[ʎaga] <leagá> ‘leaf’	[ʎag-re] <liagré> ‘grass’
‘father, priest’	[uze] <uxé> ‘priest’	[uz-ã-re] <usanré> ‘(my) father’
‘iron, metal’	[gis gibe] <quis quibé> ‘knife’	[gib jaga] <quibiagá> ‘axe’
‘head’	[giʃ iki] <quisiquí> ‘hair’	[ik-ã-re] <ycanré> ‘(my) head’
‘hair’	[giʃi ru-na] <quisiruná> ‘beard’	[giʃ iki] <quisiquí> ‘hair’
‘big’	[en-ili] <enhili> ‘big’	[biz il-na] [g ^w i il-re] <bisilná> ‘thumb’ <cuiilré> ‘star’

- (6) <yta quieyé> ‘stone rain’ = ‘snow’
 <heita illi> ‘stone big’ = ‘hail’
 <heitaquibiora> ‘stone metal gold’ = ‘gold’

In its conditioned deletion of posttonic vowels, Elotepec Zapotec shows greater affinity with Zaniza than Texmelucan Zapotec. The two languages also show greater affinity in their treatment of pretonic vowels (Table 15), including with respect to their gradual weakening through raising, as seen in colonial-era borrowings from Spanish (Table 16).

Table 15. Treatment of pretonic vowels in Papabuco

Elotepec	Zaniza	Texmelucan	
<bixinñí>	/bizɪp/	/bzɪp/	‘mouse’
<billisí>	/bizɪz/	/bdʒidʒ/	‘pineapple’

Table 16. Raising of pretonic vowels in early Spanish loans

Spanish word	Elotepec	Zaniza	
tomín	<-timienná>	/timij/	(type of silver coin)
amigo	<ymigaré>	/miw/	'friend'

5. Morphosyntax

The responses to the Peñafiel questionnaire contain a fair amount of information about the inflection, derivation and syntactic structures of Elotepec Zapotec. They show, for instance, that Elotepec Zapotec has both free-standing and clitic forms of personal pronouns (Table 17), that the clitic pronouns may be used as subjects of verbs (7a) and possessors of nouns (7b), that there is at least one deictic clitic (7c), that adjectives occur after the nouns they modify (7d) and that the modifying member of a nominal compound follows the head (7e). The expressions with which the respondent translated Sp. *lloviznar* 'to drizzle' and *trabajar* 'to work' point to the verb-initial constituent order and the possibility of preverbal placement of nominal objects, respectively (7f).

Table 17. Elotepec Zapotec personal pronouns

	Peñafiel		Belmar (1901)		Rendón (1971)	
	free	clitic	free	clitic ¹⁰	free	clitic
1SG	<aan>	<an> ~ <án>	<â>	<â> / <a>	a ³ N	(l)a ^{1/3} N
2SG	<ruú>	<rú>	<ru>	<ru> / <ru>	ru ³	(l)ru ³
3SG	<yrsé>	<ya> ~ <ia>	<iré>	<ire> / <ya>	i ¹ r ¹ e	(y)a ³
1PL	<biegniá>	<na> ~ <ná>	<cikènana> ¹¹	<nîa> / <na>	bi ² ge ¹ nna ³	(l)na ^{1/3}
2PL	<bigaaná>	--	<bikèru>	<bkieru> / <ru>	bi ² g(i)ru ³	(l)ru ¹
3PL	<bicailié>	--	<bikire>	<bikire> / <ya>	bi ² gi ¹ re ¹	(y)a ¹
3AN	--	<-má>	--	--	--	--

(7a) <dezná>
<dez-ná>
sleep-1PL
'we sleep'

<heryimmá>
<heryim-má>
bark-3ANIMAL
'it barks'

(7b) <luxná>
<lux-ná>
tongue-1PL
'our tongue'

<cuirán>
<cuir-án>
leg-1SG
'my leg'

(7c) <baré>
<ba-ré>

<ycanré>
<yc-an-ré>

¹⁰ The first form in each set is possessor clitic and the second form is subject clitic (Belmar 1901: 4-7).

¹¹ A likely typo for <bikèna>. Belmar describes <bike> as a plural morpheme (1901: 4-5).

	‘sky-DEICTIC’ ‘sky’	‘head-1SG-DEICTIC’ ‘my head’
(7d)	<heita illi> stone large ‘large stone’	<bichibalanré> <bichi bal-an-ré> ‘brother old-1SG-DEICTIC’ ‘my elder brother’
(7e)	<quisiquí> <quis iquí> hair head ‘(head) hair’	<tiomgieyé> <tiom gieyé> time rain ‘rainy season’
(7f)	<yatiguieyé> <yati guieyé> fall rain ‘it rains’	<riniricháán> <rini rich-áán> work do-1SG ‘I work’

From the viewpoint of their morphological makeup, the native noun types in the Peñafiel vocabulary comprise mono- and disyllabic root nouns, nouns of two or more syllables that contain a prefix, and compounds. Three of the nouns borrowed from Spanish are furnished with what appears to be a suffix (see Table 18).

Table 18. Structural types of nouns in Elotepec Zapotec

Type of noun	Examples
Root noun	<dó> ‘sea’ <nisi> ‘water’
Prefixed noun	<ygalá> ‘old (man)’ <bixinñí> ‘mouse’ <ezquiegué> ‘fly’
Compound	<yta quieyé> ‘snow’ (‘stone rain’) <quisiquí> ‘hair’ (‘hair head’) <bisilná> ‘thumb’ (‘finger large’)
Spanish loan noun with a suffix	<jefeson> ‘boss’ <tigreson> ‘tiger’ <fleche essón> ‘arrow’

The kinship and body part terms are typically furnished with a first person clitic pronoun and/or the deictic clitic <ré>; the clitic is found on other types of nouns as well (8a-b). If both types of clitics are present, the pronoun occurs closer to the noun stem (8c).

(8a)	<binián>	/biŋ-ã/	‘woman-1SG’ = ‘my wife’
	<cuirán>	/k ^w ir-ã/	‘leg-1SG’ = ‘my leg’
	<loná>	/lo-na/	‘face-1PL’ = ‘our face’

- (8b) <bedoré> /bedo-re/ ‘child-DEICTIC’ = ‘child’
 <canoré> /kano-re/ ‘trough-DEICTIC’ = ‘trough’
 <baré> /ba-re/ ‘sky-DEICTIC’ = ‘sky’
- (8c) <usanré> /uz-ã-re/ ‘father-1SG-DEICTIC’ = ‘my father’
 <ycanré> /ik-ã-re/ ‘head-1SG-DEICTIC’ = ‘my head’

Among the identifiable noun prefixes or proclitics are animacy and nominalization markers (9a); the latter are also also used with adjectives (9b).

(9a) Animacy markers

<bi> ~ 		<ez> ~ <es>	
<binián>	‘woman’	<ezquiegué>	‘fly’
<bixinñí>	‘mouse’	<ezquincazá>	‘crow’
<billisí>	‘pineapple’	<esquienú>	‘mosquito’
<brisi>	‘squirrel’	<esquinloyec>	‘bird’

(9b) Nominalization markers

<y> / <en>		<en>	
<ycuené>	‘boy’	<encasá>	‘black’
<yquieyé>	‘man’	<encaá>	‘sky-blue’
<ygalá>	‘old (man)’	<enguesé>	‘yellow’
<ybana>	‘thief’	<enquiné>	‘green’
<ytó>	‘dead (person)’	<eññan>	‘red’
<embedo>	‘child’	<enmihi>	‘small’
<encuenébiniá>	‘girl’	<enhili>	‘big’

Cardinal numerals above ten are built by using the linking elements <bi> ~ <be> and <rebi> ~ <rebe>. The element <nala>, which may be morphologically related to <galá> ‘twenty’, appears to function with the meanings of ‘twenty’ (in <taabinala> ‘eighty-and-twenty’ = ‘hundred’) and ‘hundred’ (in <chalnalá> ‘half-hundred’ = ‘fifty’). Its cognate in Texmelucan Zapotec has the meaning ‘twenty’ in /gajnal/ ‘hundred’ (‘five-twenty’); in Zaniza Zapotec, /nal/ means ‘hundred’, both by itself and in /tʃal nal/ ‘fifty’ (‘half-hundred’).

- (10) <chi-bi-tubi> ‘10-and-1’ = ‘11’
 <chi-be-chopa> ‘10-and-2’ = ‘12’
 <gal-rebe-chí> ‘20-and-10’ = ‘30’
 <chal-nalá> ‘half-100’ = ‘50’
 <quion-rebi-chí> ‘60-and-10’ = ‘70’
 <taa-bi-chí> ‘80-and-10’ = ‘90’
 <taa-bi-nala> ‘80-and-20’ = ‘100’

In the verb, both Zaniza and Texmelucan Zapotec morphologically distinguish five TAM categories: potential, habitual, completive, irrealis and stative/continuative (Speck 1978: 26-28; Operstein 2015a: 28ff). The Peñafiel vocabulary presents enough verb forms in its responses to identify four of these categories in Elotepec Zapotec (see Table 19).

Table 19. TAM categories in Elotepec Zapotec¹²

Potential	Habitual	Completive	Stative/Continuative
<hi-ñi-na> 'we will speak'	<her-yím-má> 'it barks'	<hu-ni-yá> 'he spoke'	<yati guieyé> 'it rains'
<y-sob-an> 'I will sit down'	<ni er-sob ru-yá> 'which he puts in his mouth'		
<dau-na> 'we will eat'	<r-au-rú> 'you eat'		

Both Texmelucan and Zaniza Zapotec possess a substantial number of verbs in which the stem used with first-person subjects is different from the stem used with second- and third-person subjects (Speck 1978: 37; Operstein 2015a: 55). The practice of the Peñafiel vocabulary's respondent to supply many of the Spanish verbs with first-person subjects in Elotepec provides us with valuable information about this type of suppletion in Elotepec Zapotec (Operstein 2017a). The form <raurú> 'you eat', apparently given in error as an answer to the Spanish prompt *correr* 'to run', supplies direct confirmation of the existence of this suppletion type in Elotepec in view of the response <dauna> 'we eat' to the earlier Spanish prompt *comer* 'to eat' (see Table 20).

Table 20. Suppletive first-person verb forms in Elotepec Zapotec

Elotepec		Zaniza		Texmelucan		
1 person	2/3 person	1 person	2/3 person	1 person	2/3 person	
<dauna>	<raurú>	/daw/	/aw/	/daw/	/o/	'eat'
<diana>		/do'/	/o'/	/do'/	/o'/	'drink'
<dalná>, <dalruná>		/dul/	/ul/	/dul/	/ul/	'dance', 'sing'
<dezná>		/das/	/as/	/das/	/aas/	'sleep'
<dutaní>		/dut/	/ut/	/dut/	/ut/	'kill'
<yapaán>		/jap/	/jed/	/jap/	/jed/	'come'

6. Spanish loanwords

Twenty-two responses in the Peñafiel vocabulary contain nouns borrowed from Spanish. Several of the borrowings contain an added suffix or final consonant (11b) and several more occur as part of a hybrid, Zapotec-Spanish compound (11c); the words for 'friend', 'tobacco', 'trough' and, possibly, 'time' are supplied with a deictic. In quantitative terms, the lexical items built in whole or in part on Spanish-derived items constitute about 9% of the total.

	<u>Spanish prompt</u>	<u>Elotepec response</u>	
(11a)	dios	<chuyé>	'God'
	indio	<yinchí>	'Indian'

¹² The English glosses reflect the morphological makeup of the forms rather than the corresponding Spanish prompts.

	amigo	<ymigaré>	‘friend’	
	soltero	<solteré>	‘young (man)’	
	tortuga	<tortuga>	‘turtle’	
	paloma	<uraga>	‘dove’	(< urraca)
	pato	<badá>	‘duck’	
	villa	<villi>	‘villa’	
	canoa	<canoré>	‘trough’	
	tabaco	<tabaueré>	‘tobacco’	
	pipa	<barril ó cachimba>	‘pipe’	(< barril, cachimba)
	mil	<mil>	‘thousand’	
	tiempo	<tiemnέ>	‘time’	
(11b)	jefe	<jefeson>	‘boss’	
	tigre	<tigreson>	‘tiger’	
	flecha	<fleche essón>	‘arrow’	
	ganso	<gansex>	‘goose’	
(11c)	plata	<guibitimienñá>	‘silver, money’	(< tomín)
	jabalí	<cusquillé>	‘wild boar’	(< cuche)
	primavera	<tiomgieyé>	‘spring’	(< tiempo)
	otoño	<tieonquasá>	‘fall’	(< tiempo)
	verano	<tiemerrubiy>	‘summer’	(< tiempo)

The phonological shape of several of the Spanish loans betrays an early date of borrowing. For <chuyé> ‘God’, this inference is suggested by the adaptation of the Spanish sibilant as a palatal fricative, a common strategy for adapting this sound in early Spanish loans in indigenous languages of Latin America (Parodi 1995, 2017; Smith Stark 2007; Operstein 2016, 2017b). This treatment is not apparent in <solteré> ‘young (man)’ and <gansex> ‘goose’, which thus appear to have been borrowed more recently. For <chuyé> ‘God’ (< Sp. *dios*) and <ynchí> ‘Indian’ (< Sp. *indio*), an early date of borrowing may additionally be inferred from the adaptation of the sequence /dj/. As seen in Table 21, and in contrast with its treatment in more recent loans such as Texmelucan /radjo/ (< Sp. *radio*), in the early loan *dios* the sequence /dj/ has the same reflex in all three Papabuco languages as Proto-Zapotec *t’ (see Operstein 2005: 110-111 and 2012: 8-9). The early date of borrowing of <cus-> (< Sp. *cuche* ‘pig’) is suggested by deaffrication of the Spanish affricate; this contrasts with the lack of deaffrication in what are apparently later loans <fleche essón> ‘arrow’ and <cachimba> ‘pipe’. Deaffrication of /tʃ/ in this Spanish loan parallels that of *tʃ (see Table 21). The early date of entry of <badá> ‘duck’ (< Sp. *pato*) is suggested by the adaptation of the Spanish voiceless stops as lenis (voiced) rather than fortis (unvoiced); this contrasts with more recent loans, such as <tigreson> ‘tiger’ and <tortuga> ‘turtle’. Other seemingly early loans include <ymigaré> ‘friend’ (< Sp. *amigo*) and <timienñá> (< Sp. *tomín* (a silver coin)), since the raising of pretonic vowels in these words contrasts with the lack of vowel raising in <tortuga> ‘turtle’ and <solteré> ‘young (man)’. Some Spanish-origin words, including *tortuga* ‘turtle’, *mil* ‘thousand’, and *cachimba* ‘pipe’, appear completely unadapted phonologically. The remaining loans show different degrees of phonological and/or morphological adaptation to the Elotepec structures.

Table 21. Treatment of /dj/ and /tʃ/ in early Spanish loans in Elotepec Zapotec

		Texmelucan	Zaniza	Elotepec	
*tt'	*laʔtt'iʔ	/lac/	/latʃ/	<lech(ilgré)>	'valley'
/tj/	tiempo	/tjem/	/tjem/	<tiemnéné>	'time'
*t'	*kat'i	/gaʃ/	/gadʒ/	<gueché>	'seven'
/dj/	dios	/ɲɔoʒ/	/dʒuʒ/	<chuyé>	'God'
*tʃ	*kittza(?)	/ʃitʃ/	/giʃ/	<quis(iquí)>	'hair'
/tʃ/	cuche	/kutʃ/	/kuʃ/	<cus(quillé)>	'pig'

7. Residual issues

Some of the responses to the Spanish prompts contain inconsistencies and apparent orthographical errors, which in some cases may affect the correctness of their interpretation. For example, <zan maré> 'my younger sister' is an apparent typo for <zan miaré>; this inference follows from comparing this entry with the entries <bichimiaré> 'my younger brother' and <enmihi> 'small' and in light of the Zaniza and Texmelucan Zapotec cognate /mi/ 'small'. <lechilgré> 'valley' is an apparent typo for <lechilré> (i.e. <lech il-ré>), as is suggested by the immediately following response <lechimiré> (i.e. <lechi mi-ré>) 'plain': these entries arguably contain as their second elements the adjectives 'big' and 'small', respectively. <biltí> 'rabbit' is an apparent typo for <billí> (/biʃi/); this inference follows from the cognate forms in Zaniza and Texmelucan Zapotec (/biʃ/ and /bitʃ/, respectively) and from Belmar's (1901) form <bisekuliana> 'hare', an apparent compound of <bise> 'rabbit' and <kuliana> 'hare'. The <t> for <l> typo is also found in <biti quillé> 'snake', for the intended <bili quillé>, in light of the cognate /biʃ/ 'snake' in Zaniza and Texmelucan Zapotec and the immediately following entry, <billesie> 'rattlesnake'. <lumní> 'eight' appears to be a typo for <lluní>, or perhaps <lluñí>, given that this form is given as <shuñi> by Belmar (1901) and in view of its cognate /ʃuɲ/ in Zaniza and Texmelucan Zapotec.

Another orthographic issue is inconsistent representation of the first person singular pronoun /ã/: while its nasality is often marked by a following <n>, this tends not to happen when there is an immediately preceding nasal consonant (see (12)). Based on Rendón's (1971) observation that nasality is found in nasal contexts in Elotepec Zapotec, I assume that all the forms in (12) contain the first person singular possessive pronoun /ã/.

(12)	<u>Nasality is marked</u>	<u>Nasality is unmarked</u>
	<bichibal <u>an</u> ré> 'my older brother'	<bichimiaré> 'my younger brother'
	<usan <u>an</u> ré> 'my father'	<na <u>re</u> > 'my mother'
		<ni <u>ar</u> é> 'my husband'
		<bi <u>ni</u> aré> 'my wife'

A few of the responses contain apparent mistakes. For example, <billisí>, provided in response to the Spanish prompt *pino* 'pine tree', is clearly cognate with the Zaniza and Texmelucan words for 'pineapple' (Sp. *piña*). Elotepec <bití>, provided in response to Sp.

zorra ‘fox’, is cognate with Zaniza and Texmelucan words for *zorrito* ‘skunk’. The form <raurú> ‘you eat’ (Sp. *comer*) was apparently given in error in response to Sp. *correr* ‘to run’ (see Table 21).

Table 21. Erroneous responses

Spanish prompt	Elotepec response	Zaniza cognate	Texmelucan cognate
<i>pino</i> ‘pine tree’	<billisí>	/biz̥zi/ ‘pineapple’	/bd̥zid̥z/ ‘pineapple’
<i>zorra</i> ‘fox’	<bití>	/bit/ ‘skunk’	/bit/ ‘skunk’
<i>armadillo</i> ‘armadillo’	<bixi>	/bez/ ‘fox’	/bez/ ‘fox’
<i>correr</i> ‘to run’	<raurú>	/rawr/ ‘you eat’	/ror/ ‘you eat’
<i>blanco</i> ‘white’	<quicheguesé>	/katʃ/ ‘white’ /kaaʃ/ ‘yellow’	/kaac/ ‘white’ /caatʃ/ ‘yellow’

Some Elotepec responses contain added material not found in their cognates in the other Papabuco languages or in the Elotepec forms cited in Belmar (1901) and/or Rendón (1971). Some of the responses disagree with the Elotepec forms reported in the other sources. One example of this are different allomorphs of the numerals ‘one’ and ‘two’ depending on whether they are cited in isolation or as part of the numerals ‘eleven’ and ‘twelve’: as seen in Table 22, the allomorphy <tibi> ~ <tubi> ‘one’ and <chabá> ~ <chopa> ‘two’ is not reported by Belmar (1901) and is not present in the other Papabuco languages. The unexpected response <bilñici> to the prompt *nombre* ‘name’ appears to have been influenced by, and perhaps given in response to, the immediately preceding entry *anguila* ‘eel’: <bilñici> appears to be composed of <bil> ‘snake’ and <ñici> ‘water’.

Table 22. Selected Elotepec responses

Peñañiel	Belmar (1901)	Rendón (1971)	Zaniza cognate	Texmelucan cognate	
<laegrellé> ¹³	<yaga>	<yaga>	/jag/	/jag/	‘tree’
<balsedé> ¹⁴	<balla>	<bala>	/bal/	/bel/	‘fish’
<ticiudán>	<shina>	<Sa ¹ N>	/ʃi/	/ʃe/	‘belly’
<betbalná>	<balla> ‘meat’	<ba ³ la> ‘meat’	/bal/ ‘meat, body’	/beel/ ‘meat’	‘body’
<bilñici>	<laa>	<la ³ >	/la/	/nu la/	‘name’
<esquinloyec>		<i ¹ SSki ³ ñi>	/ʃigij/	/tʃijij/	‘bird’
<yinquillanré>	<iñi>		/iʲn/	/iʲn/	‘(my) son’
<yuhu dusanguaquiýé>			/juʲ giʒ/	/juʲ jiʒ/	‘thatch hut’

¹³ Compare this with <guibiagá> ‘axe’, a compound whose second member <iaga> is the word for tree or wood.

¹⁴ This entry may mean ‘salted fish’ (cf. <zedé> ‘salt’).

<billesie>			/biʎ bisuj/	/biʎ daab/	‘rattlesnake’
<loxilna>			/ʃiʎ/	/lowe/	‘wing’
<tibi> <chibitubi>	<tibi> <chiirbititibi> ¹⁵		/tib/ /ʃiribitib/	/tub/ /trotub/	‘one’ ‘eleven’
<chabá> <chibechopa>	<chopa> <chiirbichopa>		/tʃup/ /ʃiribitʃup/	/cup/ /trocup/	‘two’ ‘twelve’

Some of the responses to the noun entries are rendered by means of verb forms or circumlocutions. For example, the Elotepec translation for Sp. *mañana* ‘morning’ is <hersilná>, which appears to be the habitual form of the verb <sil> with the first person plural subject (<her-sil-na>); this verb appears to be related to the noun ‘breakfast’ in Texmelucan Zapotec (/siiʎ/) and Zaniza Zapotec (/siʎ/). The translations for *trueno* ‘thunder’ (<herniquiuxi>) and *relámpago* ‘lightning’ (<heryiloquixi>) are also verbal in form and appear to contain the noun <uxi> /uzi/ ‘thunder’ (cf. /guzii/ ‘thunder’, /ʃi ni guzii/ ‘lightning’ in Texmelucan Zapotec and /uzi/ ‘thunder’, /ʃi lo uzi/ ‘lightning’ in Zaniza Zapotec). The Elotepec response to *pipa* ‘pipe’ is <niersobruyá>, ‘what he puts in his mouth’ (<ni er-sob ru-yá>). The response to *pipa* also contains two Spanish loans or single-word code-switches, <barril ó cachimba>. The translation for Sp. *caldera* ‘cauldron’, <serupinieyé>, is perhaps analyzable as a place nominalization, <se rupi nieyé> ‘where clothes are washed’ (cf. /ze/ ‘there’, /nedʒ/ ‘clothes’ in Zaniza Zapotec; and /ze/ ‘there’, /nej/ ‘clothes’ in Texmelucan Zapotec).

The abstract nouns at the end of the Peñafiel vocabulary, from No. 241 to No. 250, except the words for *tiempo* ‘time’ and *razon* ‘reason’, proved to be the most challenging for the respondent. While some of these contain identifiable morphemes – for example, <becuexedé> ‘laziness’ clearly contains <xedé> ‘lazy’ (cf. Zaniza /zed/, Texmelucan /zeed/), and several appear to contain the first person pronominal clitic <an> – they are not easy to analyze with the limited amount of data available. To some extent, this is also true of the words referring to the seasons of the year; while the translations for spring (<tiom-gieyé> ‘rain season’) and fall (<tieon-quasá> ‘dry season’) are clear, the one for winter, <visgraená>, is unanalyzable, and the one for summer, <tiom-errubiy>, contains an unclear second element. The translation for No. 53 *guerrero* ‘warrior’, <ygqui, eryú>, is also phonologically and morphologically unclear.

8. Summary

This paper has presented a transcription and a linguistic and orthographic analysis of the Peñafiel vocabulary from San Juan Elotepec, a unique document reflecting the state of the Elotepec Zapotec language in the last decades of the nineteenth century. Where applicable, the data from the Peñafiel vocabulary have been evaluated in relation to the only other two available publications on Elotepec Zapotec, Belmar (1901) and Rendón (1971). Based on the 1990 census, *The Ethnologue* (Eberhard et al. 2019) reports the population of San Juan Elotepec as 200, and its status as moribund (used actively only by members of the

¹⁵ A likely typo for <chiirbititibi>.

grandparent generation and older). It is hoped that this paper will provide a stimulus for undertaking timely documentation of this under-studied and endangered language.

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Appendix

The table below presents my transcription as well as a phonological and morphological analysis of the responses to the Peñafiel vocabulary from San Juan Elotepec.

¹⁶ This is how the manuscript is cited in Suárez (1972: 231).

The first column shows the item's number in the Peñafiel vocabulary, the second column contains the Spanish prompt and the third the corresponding response in Elotepec; both are given in the original orthography except for capitalization, which has been eliminated. When the Elotepec response contains an apparent typo, the hypothesized intended form is supplied in brackets next to the actual form.

The fourth column contains the proposed phonological representation of the Elotepec responses. The fifth column offers the proposed morphological breakdown of each Elotepec response if it is believed to contain more than one morpheme; the affixes and clitics are separated from each other and from other morphemes by dashes, and the compound constituents are separated by a blank space. The last column supplies the glosses in English; if the response given in Elotepec is different from the one intended by the Spanish prompt, the prompt and the response are glossed separately, with the two glosses separated by a slash.

NO	SPANISH PROMPT	ELOTEPEC RESPONSE	PHONOLOGICAL ANALYSIS	MORPHOLOGICAL ANALYSIS	ENGLISH GLOSS
1	dios	chuyé	/dʒuʒe/		God
2	sacerdote	uxé	/uze/		priest
3	templo	guexé	/weʒe/		church
4	hombre	yquieyé	/ig'eje/		man
5	mujer	binián	/bijã/	/bij-ã/	woman / my wife
6	muchacho	ycuené	/ik ^w ene/	/i-k ^w ene/	boy
7	muchacha	encuenébiniá	/enk ^w enebija/	/en-k ^w ene bija/	girl
8	niño ó niña	embedo ó bedoré	/enbedo/, /bedore/	/en-be-do/, /be-do-re/	child
9	mi padre, dice el hijo	usanré	/uzãre/	/uz-ã-re/	my father, says the son
10	" " dice la hija	usanré	/uzãre/	/uz-ã-re/	" " says the daughter
11	mi madre, dice el hijo	naré	/nãre/	/n-ã-re/	my mother, says the son
12	" " dice la hija	naré	/nãre/	/n-ã-re/	" " says the daughter
13	mi marido	niaré	/jãre/	/j-ã-re/	my husband
14	mi esposa	biniaré	/bijãre/	/bij-ã-re/	my wife
15	mi hijo, dice el padre	ynquillanré	/ingiãre/	/in giã-ã-re/	my son, says the father

16	mi hijo, dice la madre	ynquillanré	/ingiǰãre/	/in giǰ-ã-re/	my son, says the mother
17	mi hija, dice el padre	ynquillanré	/ingiǰãre/	/in giǰ-ã-re/	my daughter, says the father
18	mi hija, dice la madre	ynquillaré (ynquillanré)	/ingiǰãre/	/in giǰ-ã-re/	my daughter, says the mother
19	mi hermano mayor	bichibalanré	/bitǰibalãre/	/bitǰi bal-ã-re/	my older brother
20	mi hermano menor	bichimiaré	/bitǰimiãre/	/bitǰi mi-ã-re/	my younger brother
21	mi hermana mayor	zan balanré	/zan balãre/	/zan bal-ã-re/	my older sister
22	mi hermana menor	zan maré (zan miaré)	/zan miãre/	/zan mi-ã-re/	my younger sister
23	indio	ynchí	/indzi/		Indian
24	gente	beché	/betʃe/		people
25	cabeza	ycanré	/ikãre/	/ik-ã-re/	head / my head
26	pelo	quisiquí	/giʃiki/	/giʃ iki/	hair
27	cara	loná	/lona/	/lo-na/	face / our face
28	frente	tegaán	/tegaã/	/te-ga-ã/	forehead / my forehead
29	oreja	ydagaán	/idagaã/	/i-daga-ã/	ear / my ear
30	ojo	urloná	/urlona/	/ur lo-na/	eye / our eye
31	nariz	tiñia	/tjna/		nose
32	boca	runá	/runa/	/ru-na/	mouth / our mouth
33	lengua	luxná	/luzna/	/luz-na/	tongue / our tongue
34	dientes	leyná	/lejna/	/lej-na/	teeth / our teeth
35	barba	quisiruná	/giʃiruna/	/giʃi ru-na/	beard / our beard
36	cuello	nierrieñá	/perjeña/	/per jeña/	neck /

37	brazo	hianá	/jana/	/ja-na/	throat ¹⁷ arm / our arm
38	mano	hianá	/jana/	/ja-na/	hand / our hand
39	dedos	bizná	/bizna/	/biz-na/	fingers / our fingers
40	dedo pulgar	bisilná	/bizilna/	/biz il-na/	thumb / our thumb
41	uñas	choquianá	/tʃogjana/	/tʃog ja-na/	nails / our nails
42	cuerpo	betbalná	/betbalna/	/bet bal-na/	body / our body
43	pecho	lerán	/lerã/	/ler-ã/	breast / my breast
44	barriga	ticiudán	(?)	(?)	belly / my belly
45	pechos de mujer	lecbinianá	/leg'bijã/	/leg' bij-ã/	woman's breasts / my wife's breasts
46	pierna	cuirán	/k ^w irã/	/k ^w ir-ã/	leg / my leg
47	pié	quianá	/g'ana/	/g'a-na/	foot / our foot
48	dedos del pié	bizquianré	/bizg'ãre/	/biz g'-ã-re/	toes / my toes
49	hueso	riti	/riti/		bone
50	corazon	lerná	/lerna/	/ler-na/	heart / our heart
51	sangre	reñié	/reje/		blood
52	pueblo, villa, aldea	tiguyé, villi, renyé (tigueyé)	/tigeze/, /bili/ /reje/	/ti-geze/	town, village, hamlet
53	jefe	jefeson	/hefesõ/ (?)	/hefe-sõ/	boss
54	guerrero	ygqui, eryú	(?)	(?)	warrior
55	amigo	ymigaré	/imigare/	/imiga-re/	friend / my friend
56	cuna	yagilo	/jagilo/	/jag ilo/	cradle ¹⁸
57	casa	yuhú	/ju'/		house
58	choza, casa de paja	yuhu dusanguaquiyé	/ju'/ /duzãwa/ (?) /gize/	/ju'/ /du-zãwa/ (?) /gize/	(thatch) hut ¹⁹

¹⁷ Cf. /jep/ 'neck', /ger jep/ 'hole of neck = throat' in Zaniza Zapotec and /jep/, /jer jep/ in Texmelucan Zapotec.

¹⁸ Cf. /ilo/ 'spoon, ladle' in Zaniza and Texmelucan Zapotec.

59	sepulcro	rubá	/ruba/	/ru ba/	tomb / edge of tomb
60	caldera	serupinieyé	/zerupijnedze/	/ze rupi nedze/	cauldron / where clothes are washed
61	arco	xilquité	/ʃilk ^w ite/	/ʃil k ^w ite/	bow / rainbow
62	flecha	fleche essón	/fletʃe esõ/ (?)	/fletʃe esõ/	arrow
63	hacha	quibiagá	/gibjaga/	/gib jaga/	axe
64	cuchillo	quis quibé	/gis gibe/	/gis gibe/	knife
65	canoa	canoré	/kanore/	/kano-re/	trough
66	guarache ó zapato	quitlabá, labiquidé	/gidlaba/, /labigide/	/gid laba/, /labi gide/	sandal or shoe
67	pipa	niersobruyá / barril ó cachimba	/nierzobruja/	/ni er-zob ru-j/	pipe / what he puts in his mouth
68	tabaco	tabaueré	/tabawere/	/tabawe-re/	tobacco
69	cielo	baré	/bare/	/ba-re/	sky
70	sol	doré	/dore/	/do-re/	sun
71	luna	beyé	/beje/		moon
72	estrella	cuiilré	/g ^w iilre/	/g ^w i il-re/	star / big star
73	dia	lliná	/zĩna/	/zĩ na/	day / this day
74	noche	ralná	/rálna/	/ral na/	night / this night
75	mañana	hersilná	/ersilna/	/er-sil-na/	morning / we eat breakfast
76	tarde	huillé	/wizẽ/ ²⁰		afternoon
77	primavera	tiomgieyé	/tjomg'eje/	/tjom g'eje/	spring / rain
78	verano	tiomerrubiy	/tjomerubi/	/tjom erubi/ (?) ²¹	season summer / harvest
79	otoño	tieonquasá	/tjomwaʃa/	/tjom waʃa/	season fall / dry

¹⁹ Cf. /ju' gɪz/ 'thatch hut' in Zaniza and Texmelucan Zapotec.

²⁰ Cf. /uzẽ/ in Zaniza Zapotec and /gudze/ in Texmelucan Zapotec.

²¹ The second constituent of the Elotepec compound is, perhaps, related to Isthmus Zapotec /ribagu/ 'recoger lo sobrante después de la cosecha' [to collect leftover crops after the harvest].

80	invierno	vizgraená	(?)	(?)	season winter
81	viento	viy	/bi/		wind
82	trueno	herniquiuxi	/ernigiuzi/	/er-ni gi uzi/	thunder
83	relámpago	heryiloquixi (heryiloquiuxi)	/erʃilogiuzi/	/er-ʃi lo gi uzi/	lightning
84	lluvia	quieiyé	/g'eje/		rain
85	nieve	yta quieyé	/ita g'eje/	/i-ta g'eje/	snow
86	fuego	guiyé	/gije/		fire
87	agua	nisi	/nisi/		water
88	hielo	quiegué	/g'ege/		ice
89	tierra	yú	/ju/		land
90	mar	dó	/do/		sea
91	rio	guiagua	/g'awa/		river
92	lago	quialdó	/g'aldo/	/g'al do/	lake
93	valle	lechilgré (lechilré)	/letʃilre/	/letʃ il-re/	valley / big valley
94	llano	lechimiré	/letʃimire/	/letʃi mi-re/	plain / small valley
95	cerro, montaña	las ibré (las ilré)	/laʃ ilre/	/laʃ il-re/	hill, mountain / big hill
96	isla	layú ullré	/laju uʒre/ (?)	/laju uʒ-re/	island / small (?)
97	piedra, roca	heita illi	/ita ili/	/i-ta ili/	stone, rock / big stone
98	sal	zedé	/zede/		salt
99	cobre	guibequesé	/gibekeʃe/	/gibe keʃe/	copper
100	plata	guibitimienñá	/gibitimija/	/gibi timija/	silver
101	oro	heitaquibiora	/itagibiora/	/i-ta gibi ora/	gold
102	bosque, selva	laquí ilí	/lagi ili/	/lagi ili/	woods, forest / big (?)
103	arbol	llaegrellé	/jagre(?)e/	/jag re(?)e/	tree / (?) tree
104	madera	lliagá	/jaga/		wood
105	hoja	leagá	/ʎaga/		leaf
106	corteza	ledé	/lede/		bark
107	yerba	liagré	/ʎagre/	/ʎag-re/	grass
108	pino	billisí	/bizizj/	/bi-zjzj/	pine tree / pineapple
109	maíz	obá	/oba/		corn
110	frijol	ursá	/urza/	/ur za/	beans

111	calabaza	güeté	/g'ete/		squash
112	chile, pimiento	güñí	/gjni/		chili, pepper
113	carne	balá	/bala/		meat
114	murciélagó	beigidebesinnís	/begidebezjnis/	/be-gide be-zijni-s/	bat
115	perro	beco	/beko/		dog
116	coyote	yieñé	/jeje/ (?)		coyote
117	tigre	tigreson	/tigresõ/ (?)	/tigre-sõ/	tiger
118	oso	banasé	/banaze/ (?)		bear
119	leon, puma	bizquixé	/bizgiʃe/	/biz_giʃe/	lion, puma
120	lobo	bizquiasá	/bizg'aza/ (?)	/biz_g'aza/	wolf
121	zorra	bití	/biti/		fox / skunk
122	tejon	chixhé	/zizɛ/		coati
123	ciervo	lliní	/zini/		deer
124	jabalí	cusquillé	/kuʃgiʃe/	/kuʃ giʃe/	wild boar
125	armadillo	bixi	/bizi/		armadillo
126	raton	bixinñí	/bizijni/	/bi-zijni/	mouse
127	conejo	biltí (billí)	/biʃi/		rabbit
128	ardilla	brisi	/brizi/	/b-rizi/	squirrel
129	tortuga	tortuga	/tortuga/		turtle
130	lagartija	bizquidí	/bizgidi/	/biz_gidi/	lizard
131	caballo	baña	/baɲa/		horse
132	mosca	ezquiegué	/eʃg'ege/	/eʃ-g'ege/	fly
133	mosquito	esquienú	/eʃg'enu/	/eʃ-g'enu/	mosquito
134	sapo	berlabá	/berlaba/	/ber laba/	toad
135	culebra, serpiente	biti quillé (bili quillé)	/bili giʃe/	/bili giʃe/	snake
136	culebra de cascabel	billesié	/billeze/ (?)	/bil leze/ (?)	rattlesnake
137	alacran	guinec	/winek/	/wine-k/	scorpion
138	ave	esquinloyec	/eʃginlojek/	/eʃ-gin lojek/ (?)	bird
139	huevo	go	/go/		egg
140	plumas	debé	/debe/		feather
141	alas	loxilná	/loʃilna/	/lo ʃil-na/	wings ¹⁹
142	ganso	gansex	/ganseʃ/ (?)	/ganse-ʃ/ (?)	goose
143	pato	badá	/bada/		duck
144	zopilote	lieyé	/ʎeʃe/		buzzard ²²

²² The first letter of Nos. 141 and 144 is the same, and is unclear. It is assumed to be <l> based on comparison with the likely cognates of these words: No. 141 <loxilná> 'wings' is assumed to be related to /lowe/ 'wing' in Texmelucan Zapotec and /ʃiʎ/ 'wing' in Zaniza Zapotec, and No. 144 <lieyé> 'buzzard' is assumed to be cognate with /ʎaʃ/ 'buzzard' in Texmelucan Zapotec and /ʎeʃ/ 'buzzard' in Zaniza Zapotec.

145	cuervo	ezquincazá	/eʃginkasa/	/eʃ-gin kasa/	crow
146	guajolote	cola	/kola/		turkey
147	paloma	uraga	/uraga/		dove
148	pez	balsedé	/balzede/	/bal zede/	fish / salted fish (?)
149	bobo, pescado	balá	/bala/		fish species
150	bagre	bal nullelmá	/bal nuʃelma/ (?)	bal nuʃelma (?)	catfish / fish (?)
151	anguila	bili nullelmá	/bili nuʃelma/ (?)	bili nuʃelma (?)	eel / snake (?)
152	nombre	bilñici	/bilñisi/	/bil nisi/	name / water snake ²³
153	blanco	quicheguesé	/kitʃekeʃe/	/kitʃe keʃe/	white / white- yellow
154	negro	encasá	/enkasa/	/en-kasa/	black
155	colorado	eññan	/eɲɲa/	/en-ɲa/	red
156	azul celeste	encaá	/enka/	/en-ka/	sky blue
157	amarillo	enquesé	/enkeʃe/	/en-keʃe/	yellow
158	verde	enquiné	/enquine/	/en-kine/	green
159	grande	enhili	/enili/	/en-ili/	big
160	pequeño	enmihi	/enmi/	/en-mi/	small
161	fuerte	robrú	/robru/	/rob-ru/	strong / you are strong
162	viejo	ygalá	/igala/	/i-gala/	old (man)
163	jóven	solteré	/soltere/		young (man)
164	bueno	napia	/napja/	/nap-ja/	good / he is good
165	malo	tenyia	/teɲja/	/teɲ-ja/	bad / he is bad
166	muerto	ytó	/ito/	/i-to/	dead (person)
167	vivo	zanayaá	/zanaja/ (?)	/zana-ja/ (?)	alive / he is alive (?)
168	frio	rayá	/raja/		cold
169	caliente	bexiguí	/bezigi/	/be-zigi/	hot
170	yo	aan	/ã/		I
171	tú	ruú	/ru/		you (sg.)
172	él	yrsé	/irze/	/i-r-ze/	he

²³ See Table 22 and the accompanying discussion.

173	nosotros	biegniá	(?)	(?)	we
174	vosotros	bigaaná	(?)	(?)	you (pl.)
175	ellos	bicailié	(?)	(?)	they ²⁴
176	este	yiesán	/jezã/ (?)		this
177	aquel	yrecáá	/ireka/	/i-re-ka/ (?)	that
178	todo, todos	ydelní	/idelni/	/i-del-ni/	all
179	mucho, muchos	bierobbigía	/birobigia/ (?)	/bi-rob igia/	much, many / many men ²⁵
180	quien	chumdec	/tʃumdek/	/tʃum-dek/ (?)	who
181	léjos	zecto (zeeto)	/zeto/		far
182	cerca de	gabá	/gaba/		near
183	aquí	ylá	/ila/		here
184	allá	yuní	/juni/		there
185	hoy	naá	/na/		today
186	ayer	nagée	/nage/		yesterday
187	mañana (el dia de)	galibé	/galibe/	/gali-be/ (?)	tomorrow
188	sí	han	ã (?)		yes
189	no	haan	ã' (?)		no
190	uno	tibi	/tibi/		one
191	dos	chabá	/tʃaba/		two
192	tres	zosná (zoná)	/ʃona/		three
193	cuatro	tapa	/tapa/		four
194	cinco	guiyé	/gije/		five
195	seis	llopa	/ʃopa/		six
196	siete	gueché	/gedʒe/		seven
197	ocho	lumní (llunní)	/ʃuni/		eight
198	nueve	gá	/ga/		nine
199	diez	chís	/tʃis/	/tʃi-s/ (?)	ten
200	once	chibitubi	/tʃibitubi/	/tʃi bi tubi/	eleven
201	doce	chibechopa	/tʃibitʃopa/	/tʃi bi tʃopa/	twelve
202	veinte	galá	/gala/		twenty
203	treinta	galrebechí	/galrebetʃi/	/gal rebi tʃi/	thirty
204	cuarenta	chó	/tʃo/		forty
205	cincuenta	chalnalá	/tʃalnala/	/tʃal nala/	fifty

²⁴ The plural pronouns contain what appears to be a pronominal plural marker /big(a)/ followed by clitic pronouns. Given the forms cited by other sources (see Table 15) and cognates in the other Papabuco languages, the answer to the prompt *nosotros* ‘we’ appears to be the exclusive first person plural pronoun, and the answer to the prompt *vosotros* ‘you (pl.)’ appears to be the inclusive first person plural form.

²⁵ This analysis is based on No. 4 <yquieyé> ‘man’ and the form <bi-goroba> ‘many’ cited in Rendón (1971: 223).

206	sesenta	quioná	/gijona/	/gi-jona/	sixty
207	setenta	quionrebichí	/gijonrebitʃi/	/gi-jon rebi tʃi/	seventy
208	ochenta	taa	/ta'/		eighty
209	noventa	taabichí	/ta'bitʃi/	/ta' bi tʃi/	ninety
210	ciento	taabinala	/ta'binala/	/ta' bi nala/	hundred
211	mil	mil	/mil/		thousand
212	comer	dauna	/dawna/	/d-aw-na/	to eat / we eat
213	beber	diena	/dijena/ (?)	/d-ije-na/	to drink / we drink
214	correr	raurú	/rawru/	/r-aw-ru/	to run / you eat
215	bailar	dalná	/dalna/	/d-al-na/	to dance / we dance
216	cantar	dalruná	/dalruna/	/d-al ru-na/	to sing / we sing
217	dormir	dezná	/desna/	/d-es-na/	to sleep / we sleep
218	hablar	hiñina	/iɲina/	/i-ɲi-na/	to speak / we speak
219	ver	higuiná	/ig ^w ina/	/i-g ^w i-na/	to see / we see
220	amar	guitiragueieranlor u	/kitirakelerãloru/	/kiti rake ler-ã lo- ru/	to love / I love you
221	matar	dutaní	/dutãni/	/d-ut-ã(n)-i/ (?)	to kill / I kill him
222	sentarse	ysoban	/izobã/	/i-zob-ã/	to sit / I sit
223	estar en pié, pararse	guasonón	/wasoõ/ (?)	/was so-õ/	to stand (up) / I stand (up)
224	ir	zabanán	/zabaã/	/zaba-ã/ (?)	to go
225	venir	yapaán	/japaã/	/japa-ã/	to come / I come
226	andar	zanán	/zaã/	/za-ã/	to walk / we walk
227	trabajar	riniricháán	/riniritʃaã/	/rini ritʃa-ã/	to work / I work
228	robar	ybana	/ibana/	/i-bana/	to rob / thief
229	mentir	liemé	/keme/ (?)		to lie
230	dar	risarú	/rizaru/	/ri-za-ru/ (?)	to give / you give (?)
231	reir	riená	/rijena/ (?)	/rije-na/	to laugh / we laugh

232	gritar	rezná	/rezɲa/	/rezɲ-na/	to shout / we shout
233	bramar	ruconá	/rukona/ (?)	/ruko-na/ (?)	to bellow
234	ladrar	heryímmá	/erʃinma/	/er-ʃin-ma/	to bark / it barks
235	cacarear	yzervezrrucaom	/izerbezɽukoma/ (?)	/iz er-bezɽ-ru ko- ma/	to crow
236	tronar	herzechí	/erzedzi/	/er-zedzi/	to thunder
237	gótear	rabá	/raba/		to drip
238	charlar	huniyá	/unija/	/u-ni-ja/	to chat / he chatted
239	lloviznar	yatiguieyé	/jatig'eje/	/jati g'eje/	to drizzle / it rains
240	gorjear	hervezná	/erbezɲa/	/er-bezɲ-na/	to chirp / we chirp
241	voluntad	hurulerán (?)	/urulerã/	/u-ru ler-ã/ (?) ²⁶	will / my heart came out (?)
242	memoria	zinyguá	(?)	(?)	memory
243	pensamiento	herhabruá	(?)	(?)	thought
244	bondad	hudímbraán	(?)	(?)	kindness
245	amor	engueganré	/engegãre/ (?)	/en-geg-ã-re/ (?)	love
246	olvido	bietíbrandí	(?)	(?)	oblivion
247	verdad	solsí	(?)	(?)	truth
248	tiempo	tiemné	/tjemne/		time
249	razon	loliy	/loli/	/lo li/	reason
250	pereza	becuexedé	/bek ^w ezede/	/bek ^w e zede/ (?)	laziness

²⁶ In several responses, it is unclear whether the intended sequence is <ler> or
. No. 241 is one of them, and the provisional analysis in the table depends on the assumption that it contains the sequence <ler>.