

TOPOLOGICAL SPATIAL RELATIONS AND FRAMES OF
REFERENCE IN SANTO DOMINGO DE GUZMÁN PIPIL:
TYPOLOGICAL AND HISTORICAL IMPLICATIONS

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A thesis submitted to the faculty of the University of North Carolina at Chapel Hill in partial fulfillment of the requirements for the degree of Master of Arts in the Department of Linguistics.

Chapel Hill
2014

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ABSTRACT

ÁLVARO HUGO SALGADO RODRÍGUEZ: Topological Spatial Relations and Frames of Reference in Santo Domingo de Guzmán Pipil: Typological and Historical Implications
(Under the direction of David Mora-Marín)

Pipil is an under-documented and severely endangered Uto-Aztecan language spoken in El Salvador. In this thesis, using data from four native speakers of Pipil, I describe topological relations and frames of reference in the Santo Domingo de Guzmán (SD) dialect of Pipil with a typological and historical approach.

I find that SD Pipil is a Type Ib language in the Ameka & Levinson (2007) typology of locative predicates (one locative verb used in locative predicates), whereas other Nahua varieties belong to Type II (small set of contrasting locative posture verbs in locative predicates). I argue that Spanish influence on SD Pipil determined this innovation.

SD Pipil features a unique system of absolute locatives that only convey information about the vertical and horizontal relationship between Figure and Ground, disregarding contact between them, and features exclusively an object-centered frame of reference, as described in the MesoSpace typology (O'Meara & Pérez 2011).

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LIST OF ABBREVIATIONS

1	First person
2	Second person
3	Third person
A	Subject of transitive verb
ART	Article
CL	Classifier
DAT	Dative
DEF	Definite article
DET	Determinant
DIM	Diminutive
EXIST	Existential
FEM	Feminine
FoR	Frame of reference
GEN	Genitive
LNK	Linker
LOC	Locative

PART	Participle
PAST	Past tense
O	Object of transitive verbs
PL	Plural
POSS	Possessive
PREP	Preposition
POSTP	Postposition
PRSUP	Presuppositional marker
PUA	Proto-Uto-Aztecan
REDUP	Reduplication
REFL	Reflexive
SD	Santo Domingo de Guzmán
SG	Singular
TOP	Topicalizer

CHAPTER 1: INTRODUCTION^{1 2}

This study focuses on the topological spatial relations and frames of reference in the Santo Domingo de Guzmán (SD) dialect of Pipil, an indigenous Uto-Aztecan language within the Mesoamerican cultural area spoken in El Salvador³. My work aims at fulfilling three main objectives:

-Describing topological relations and frames of reference in SD Pipil in detail for the first time, thus contributing to the literature on this under-documented language.

-Determining how the semantics of space in SD Pipil fit within the typologies of space description and frames of reference that have been recently proposed. Specifically, I will assess how static spatial description in SD Pipil fits within the Basic Locative Construction hierarchy advanced by Levinson and Wilkins (2006), the typology of locative predicates by Ameka & Levinson (2007), and the typology of frames of reference by the MesoSpace Project (O'Meara & Perez 2011).

¹The fieldwork for this study was carried out with the help from a grant by the Department of Linguistic of the University of North Carolina at Chapel Hill and with the invaluable collaboration of four native speaker of Pipil in Santo Domingo de Guzmán, in El Salvador.

²IRB Number: 13-2428

³As Campbell (1985: 5) notes, the name Pipil has been used by some authors in the past to refer to both the language spoken in Central America as well as to other Nahua dialects spoken in East and South Mexico. He argues that the name Pipil should be reserved only for the language spoken in Central America, and whose only living speakers live in El Salvador, as the differences between Central American Pipil and these Mexican varieties are marked enough as to be considered separate languages. This is the definition followed in this work.

-Assessing spatial language in SD Pipil from a historical and comparative perspective. I will compare spatial language in SD Pipil with that of Classical Nahuatl, the oldest attested relative of SD Pipil, and other modern varieties of Nahua⁴. Moreover, I will offer a historical perspective of modern SD Pipil locatives by comparing them with those found in the most important Pipil written sources that have survived from colonial times and with locatives found in other modern and extinct Nahua varieties of Mexico.

Although detailed fieldwork on the semantics of space has been carried out in Mayan and Otomanguean languages (O'Meara & Perez 2011: 837), no detailed description of topological spatial relations or frames of reference has been carried out in any Nahua language to this date. This study, thus, has implications on several dimensions: historical, as a comparative study on Nahua locatives can help understand the development of Pipil; theoretical, as the study of topological spatial relations and frames of reference in SD Pipil can contribute to the typological studies on space semantics that have been recently proposed; and practical, as this study can prove to be useful for language teaching and learning. This is especially important in a moment when new movements for Pipil revitalization are starting to appear in El Salvador.

This thesis begins with a summary of the ethnohistory of the Pipil-Nicarao peoples, followed by an overview of the Pipil language and a discussion of the methodology used in this research. Next, I will assess the Basic Locative Construction in SD Pipil and discuss all the locatives found during the fieldwork individually. A description of the frames of reference in SD Pipil will follow, while the final section will be devoted to the conclusions.

⁴I use the term Nahua to refer to all the languages and dialects within the Nahuatl language subfamily (See Appendix 2).

CHAPTER 2: PIPIL LANGUAGE OVERVIEW

2.1 The Pipil-Nicarao Peoples

Pipil⁵ was the language spoken by the Pipil-Nicarao peoples, whose tribes occupied territories in Guatemala and El Salvador (the Pipils), and Nicaragua (the Nicarao) at the time of the arrival of the Spanish⁶. The current consensus among scholars is that the Pipil-Nicarao peoples arrived in Central America in one or more migration waves from central Mexico (Martínez-Marín 2001; Fowler 1989: 32; Campbell 1985: 9). All other details surrounding their arrival, such as the number of migration waves, the exact routes and dates of their migrations, and even the place of origin of the Pipil-Nicarao who arrived in Central America, are still subjects of debate (Fowler 1989: 49).

Fowler (1989: 32) and Campbell (1985: 6-13) have summarized the diverse accounts and hypotheses regarding the origins of the Pipil-Nicarao people that have been advanced by different scholars through time. The most informative and influential early account is that recorded by Colonial historian Fray Juan de Torquemada. In his *Monarquía Indiana* (Torquemada 1983/1615: 452), he reports an oral tradition of the Nicarao stating their origin as

⁵Speakers of Pipil refer to their language as *nawat*; however, since the name Pipil is well-established in the literature, and because it serves to distinguish it from other Nahua languages of Mexico, it is the name I will be using throughout this work.

⁶Additional smaller Nahua-speaking enclaves were reported in Honduras, Costa Rica, and Panama during the first years of Spanish colonization, but are scarcely documented and their identification as Pipils cannot be established with certitude (Fowler 1989: 51-70).

Mexicans from the Anahuac Valley who lived in the land of Soconusco, in the Mexican state of Chiapas, when they were forced to leave their lands and migrate to the South because of the growing oppression of the neighboring Olmecs⁷. A group of these migrants settled in Guatemala and El Salvador (the Pipils), and the others in Nicaragua (the Nicaraos). The oral tradition as recorded by Torquemada includes an estimate of the time of the migration from Soconusco as ‘eight or seven lifetimes of old men’ before.

Scholars have interpreted this tradition in various ways, yielding very different hypotheses as to the origin of the Pipil-Nicarao peoples and the time of their migration. However, in the words of Fowler (1989: 38), who reviews these first reconstructions, they are “based on flimsy evidence” and “involve a good deal of speculation.” For example, German scholar Walter Lehmann (1920) estimated each of the ‘lifetimes of old men’ as 80 eighty years, and taking the date in which Torquemada recorded the oral tradition as 1600, he dated the Pipil-Nicarao migrations at around 960 CE-1040 CE. Furthermore, he sustained, without any real linguistic or archaeological evidence, that the Pipil variety spoken in El Salvador was more archaic than the one spoken by the Nicaraos and hypothesized that the former had arrived in Central America at an earlier date: 300 CE. He also proposed, probably influenced by Ixtlilxochitl (1891/1615: 36), that the Pipil-Nicarao were ultimately Toltecs who migrated during the Toltec diaspora, a now widespread idea among modern scholars (Schultze-Jena & King 2012: 7). Subsequent authors have defended Lehmann's theory of Toltec filiations and multiple migrations. Schultze-Jena (1977/1935: XIII) replicates this idea and Lothrop (1927: 217), based on archaeological evidence, defended the Toltec connection and multiple migrations of the Pipil-

⁷These ‘historical Olmecs’ Torquemada speaks of are not the civilization from the Preclassic period but rather a multi-ethnic group of Nahuas, Mixtecs, and Chocho-Popolocas that was supposedly responsible for the fall of Cholula around 800 CE (Fowler 1989: 35; Campbell 1985: 11).

Nicarao albeit with very different dates: around 1000 CE for the arrival of the Pipils in Guatemala and El Salvador, and 1400 CE for the Nicarao.

Years later, in the same line as Lehmann, Thompson (1948: 11) considered that the ‘lifetimes of old men’ in Torquemada were alluding to the Mexican *huehuetiliztli*, a period of time consisting of two 52-year cycles. Assuming that Torquemada recorded the Nicarao tradition around 1550, he concluded that their migration from Soconusco took place around 750 CE-800 CE. Jiménez Moreno (1959: 1097), following a very similar approach, but taking the year 1580 as his base, proposed a migration from Soconusco around 748 CE-852 CE. He further hypothesized that the Pipil-Nicarao were ultimately the inhabitants of a Nahuatl-speaking Teotihuacan who had migrated to Soconusco after the fall of Teotihuacan around 650 CE, and who later moved to Central America as the neighboring Olmecs became more aggressive. This Teotihuacan filiation is defended by some authors, such as Molina (1974: 14) and Borhegyi (1965: 40), who proposed that the Pipil-Nicarao peoples arrived in Central America around 1000 CE-1200 CE.

The most recent and articulate hypothesis, combining linguistic and archaeological evidence, is that by Fowler (2011; 1989; 1981). According to this author, there is no archaeological or linguistic evidence supporting Pipil-Nicarao presence in Central America prior to the Early Postclassic period (900 CE-1250 CE)⁸. The first sites showing unequivocal Mexican traits in their architecture and ceramics, in strong contrast with the material cultures of neighboring regions and past settlements, can be found in central El Salvador (in Cihuatán and Santa María) which show no sign of occupation before the Early Postclassic. He further

⁸Mesoamericanists have traditionally divided the history of pre-Columbian Mesoamerica into several time periods. Relevant to this discussion are the following: Classic (200 CE-900 CE) and Postclassic (900 CE-1520 CE); Postclassic is further subdivided into Early Postclassic (900 CE-1250 CE) and Late Postclassic (1250-1520 CE) (Mendoza 2001).

compared this archaeological evidence against a Nahua glottochronological model, finding that these dates of occupation match with a divergence node within Nahua between 900-1100 CE. Moreover, Fowler finds great similarity between the material cultures and iconography of these sites and those of Tula, and proposes a Toltec origin for the Pipils. These Early Postclassic settlements, according to this researcher, represent the first Pipil migration wave into Central America.

Fowler further identifies a final series of migrations into Central America during the first half of the Late Postclassic, evidenced in archaeological sites in Guatemala and Western El Salvador that show no sign of Early Postclassic antecedents, and links them with the fall of Tula and the subsequent Toltec diaspora. He again finds a correspondence between these dates and his Nahua glottochronological model, which shows another divergence node at 1200 CE-1350 CE. According to Fowler, these new Pipil speakers of Toltec filiation, the Nonoalca Pipils, were a threatening military and economic force for the older Pipils already established in El Salvador and, as the new Nonoalca invaders founded powerful settlements in Western and Central El Salvador, they determined the destruction of older Pipil sites such as Cihuatán and Santa María and the separation of the Pipil and Nicarao, who migrated and settled in Nicaragua sometime after 1200 CE. This territorial configuration, with powerful Pipil-speaking states in Western and Central El Salvador, and in Pacific Nicaragua, would be the one found by the Spanish at the time of their arrival to Central America in 1524.

Fowler's claims, however, have not gone undisputed. Campbell (1985: 12) considers the theory of multiple migrations and a Nonoalca-Nicarao connection to be "not convincing," as it relies heavily on glottochronology and lacks any direct linguistic or ethnohistorical evidence. Without a current consensus and without much recent progress in the search for archaeological

or linguistic evidence to elucidate these matters, it seems that the situation remains largely as described by Fowler in 1989: “The specific events and chronology of the Pipil-Nicarao migrations to Central America are still largely unknown, and the patterns that can be traced from the available evidence are only vague approximations.” (Fowler 1989: 49)

2.2 The Pipil Language

Pipil, the southernmost Uto-Aztecan language, is the only indigenous language still spoken in El Salvador (Lemus 2010: 50; Rivas 2004: 37; CONCULTURA 2003: 12). Prior to the arrival of the Spanish, it was spoken in a wide area ranging from Escuintla, in Guatemala, to Nicaragua, and possibly even parts of Costa Rica and Panama (Fowler 1989: 70; Campbell 1985: 2; Molina 1974: 10); nevertheless, following centuries of systematic cultural repression by succeeding governments and language shift, Pipil is now only spoken by a few dozen elderly people in Western of El Salvador, specifically in the *departamentos* of Sonsonate and Ahuachapán (see Appendix 1). Schultze-Jena (1977/1935: xiii) already considered Pipil in “process of extinction” and spoken in only a few scattered places in Central America when he did his fieldwork in El Salvador in 1930. Few years later, in 1932, the language received a powerful blow after the genocide of thousands of Pipil speakers in El Salvador for being considered enemies to the government after an uprising mainly demanding lands for cultivation (Gould 2008; CONCULTURA 2003: 14; Jiménez 1959: 36). As a result of this massacre, known locally as the *matanza*, in which individuals were targeted solely on the basis of their affiliation with indigenous customs, clothing, and language, many speakers stopped using Pipil in public and eventually gave up their native language.

In more recent times, the exact number of fluent Pipil speakers remains unknown and calculations vary by source. Campbell (1985: 2) deemed the language as “quite moribund” in the 1970s and estimated around 200 speakers. Ethnologue (2013), using data from 1987, reports only 20. However, more recently, the 2007 National Census declared 97 living Pipil speakers in El Salvador, while Lemus (2010: 49) has estimated less than 200 speakers based on personal observations. These higher numbers do not imply by any means that the number of speakers grew during these years; they rather reflect different attitudes towards the language: speakers who were afraid to speak Pipil due to the dangerous consequences and negative connotations are now more willing to recognize themselves as fluent in Pipil than in the past (Campbell 1985: 2).

All remaining Pipil speakers are bilingual in Spanish and Pipil, with Spanish being the dominant language. As a result of this situation of intensive contact, the structure of Pipil has been significantly influenced by Spanish. This is not only evidenced in the amount of loanwords from Spanish (see texts in Campbell 1985: 886-910; Schultze-Jena & King 2012) but also in the syntax of modern Pipil (Campbell 1987).

2.2.1 Language Classification

Nahua dialectology has been considered extremely complex and problematic (Lastra de Suárez 1986: 189; Campbell & Langacker 1978: 86) and the position of Pipil within the Nahua subfamily and Uto-Aztecan is still a matter of debate. Two main competing classification models have been proposed. A first ‘tentative’ model, advanced by Canger (1980: 16), draws a core Central/Peripheral division based on a sole isogloss, believed not to be more than 500 years old: the presence or absence of a stem final vowel in the preterite form of verbs. As an example, a Proto-Nahuatl form in the preterite, such as **ki:sa-ka* ‘(he/she/it) left,’ where **ki:sa* is the verb

root and **-ka* the past suffix, yields the following forms in different modern Nahua varieties: *ki:s*, *ki:s-ki*, and *ki:sa-k*. Those Nahua varieties that lose the stem final vowel in the preterite verb forms are classified as Central, those that preserve it are Peripheral.

Based on this criteria, Canger groups Pipil as a Peripheral variety and, claiming a number of shared innovations, such as the shift from Proto-Nahuatl **tl* to *t*, the plural morpheme of personal pronouns, and the retention of word-initial *e-* when other varieties have *ye-*, groups it together with other Nahua dialects spoken in the Mexican states of Puebla, Veracruz, and Tabasco in an Eastern subgroup.

Figure 1. Classification of Pipil according to Canger (1980)⁹

- Nahuan
 - Pochutec (extinct)
 - General Aztec
 - Central
 - Peripheral
 - Western
 - Eastern
 - Sierra de Puebla, East Puebla, South Guerrero, Isthmus
 - **Pipil**

Campbell (1985: 928), however, has challenged this classification of Pipil and the validity of the defining isogloss of Central/Peripheral dialects, demonstrating that most verbs in Pipil do in fact lose their stem final vowel in the preterite form. Furthermore, he finds evidence that the shared innovations proposed by Canger for the Eastern group are also shared by other Nahua

⁹Less supported in the Academia is Kaufman's (2001: 3) classification of Nahua languages. His model is similar to that of Canger (1980), but instead of drawing a fundamental Central/Peripheral division in the General Aztec group he draws an Eastern/Western division. Pipil, along with Sierra de Puebla, East Puebla, South Guerrero, and Isthmus Nahua, belongs to the Eastern Group. Dakin (2003, 263) has also proposed a similar division in the General Aztec subgroup, although the varieties that comprise each group are different to Kaufman's (2001) and Canger's (1980).

varieties outside it, even Central varieties, and thus cannot be considered diagnostic for classification.

Campbell (1985: 6) argues that the retention in Pipil of ancient Proto-Nahuatl features, such as the plural suffix **-t* in verbs, when all other Nahua languages have *-h* or *-ʔ*, and which is only attested in Pochutec –widely regarded as the earliest split in the Nahuatl subgroup–, along with other marked differences, secure its independence from the Eastern group defined by Canger and the position of Pipil as an independent clade within Core Nahua. Thus, the position of Pipil within Uto-Aztecan, as proposed by Campbell (1997: 137), is as follows:

Figure 2. Classification of Pipil according to Campbell (1997)

- Uto-Aztecan
 - Southern Uto-Aztecan
 - Corachol-Aztecan
 - Nahuatl
 - Pochutec (extinct)
 - Core Nahua
 - **Pipil**
 - Nahuatl (many languages and dialects)

2.2.2 Phonology

The phonology of Pipil has been described in some detail by Schultze-Jena (1982/1935), Aráuz (1960), Rivas (1969), Campbell (1985), Lemus (1997), and King (2012). All these scholars agree on the existence of the following native consonantal phonemes:

Table 1. Consonant inventory of Pipil¹⁰

	Labial	Dental	Alveo- palatal	Velar	Labio- Velar	Glottal
Stops	p	t		k [g ɣ]	k ^w	
Affricates		ts	tʃ			
Fricatives		s	ʃ			h
Liquids		l				
Nasals	m	n [m̥ n̥]				
Approximants			y		w	

During my fieldwork, I could attest that these consonants were all valid and accurately described those found in the Santo Domingo de Guzmán (SD) dialect. In SD Pipil, [g] and [ɣ] are very common allophones of /k/ word-initially and between sonorant segments, respectively (Lemus 1997: 16; Campbell 1985: 27). In addition to these native consonants, SD Pipil speakers make extensive use of Spanish phonemes, such as /b d g f r/ and their allophones, in loanwords.

Likewise, scholars agree on the existence of the following vowels in Pipil, also attested in fieldwork in Santo Domingo de Guzmán:

Table 2. Vowel inventory of Pipil

	Front	Central	Back
High	i		u
Mid	e		[o] ¹¹
Low		a	

¹⁰Segments in brackets in Table 1 represent allophones.

¹¹The mid-back vowel [o] occurs as an allophone of /u/ and in Spanish loanwords.

Phonemic vowel length was reported by Schultze-Jena (1978/1935: 18) in his fieldwork in 1930 in Izalco although he does not transcribe it systematically in his texts and vocabulary. Aráuz (1960: 31) briefly discusses “strong and weak” vowels, which may allude to vowel length distinctions, but does not define their properties. More recently, Campbell (1985: 25) documented phonemic vowel length in SD Pipil but cautioned that the distinction was not made by all his consultants. Indeed, King (2012: 14) and Lemus (1997: 30) claim that this contrast has been lost among modern speakers. During my fieldwork, I could attest that none of my consultants made a contrast in vowel length, and for this reason I do not list long vowels as part of the vowel inventory of SD Pipil.

In native Pipil words, the maximal syllable template is $(C_1)V(C_2)$ and stress is for the most part placed in the penultimate syllable of each word (King 2012: 15-6; Campbell 1985: 14; Rivas 1969: 11-2).

2.2.3 Writing System

Until recent times, Pipil lacked a standardized writing system. As a consequence of the fact that almost every author followed his own conventions when writing in Pipil, there are many different alphabets that have been used to write the language in printed media since Colonial times. The most recent efforts to develop a standard Pipil writing system that goes beyond the merely descriptive purposes and is aimed at facilitating learning by native and new Pipil speakers are those by Lemus (1997) and the Seminario Lingüístico de Náhuatl (SLN) (2003). Both alphabets are currently in use in different publications.

Whereas Lemus’ alphabet adheres to the rule of “one symbol per phoneme,” the one proposed by the SLN (2003) tries to reconcile the two main orthographical traditions in Pipil

writing, namely: i) the alphabets influenced by Spanish orthography and phonology used by the older sources and native Pipil writers, and ii) the phonemic or more ‘linguistic’ alphabets represented by Rivas (1969), Schultze-Jena (1982/1935), Campbell (1985), and Lemus (1997). In this work, I will use the alphabet proposed by the SLN, since it has been quickly adopted by the community of new Pipil learners in recent years, and it is the writing system used in the recent versions of the most important texts in the language, such as student texts (King 2011), and the *Tajtaketza pal Ijtzalku* (Schultze-Jena & King 2012).

Table 3 shows the symbols for the consonants of Pipil in the alphabet proposed by the SNL. The symbols representing native Pipil sounds are shown in bold font and their allophones are within brackets. When a given symbol is not identical to its IPA equivalent, the IPA symbol is shown in normal font.

Table 3. Pipil alphabet proposed by the SLN (2003)

	Labial	Dental	Alveo- palatal	Velar	Labio- Velar	Glottal
Stops	p	t		k [k g ɣ]	kw	
Affricates		tz ts	ch tʃ			
Fricatives		s	sh ʃ			j h
Liquids		l				
Nasals	m	n [m n ɲ ɳ]				
Approximants			y		w	

Additionally, this alphabet includes the symbols for non-native sounds **b, d, g, x, f, v, z, h, ñ, r** used mainly in words of Spanish origin. The vowels are the same as those in Table 2.

2.2.4 The Santo Domingo de Guzmán Dialect

Santo Domingo de Guzmán, or *Witzapan* in the Pipil language, is a town in Western El Salvador (see Appendix 1) with a population of 7,055 inhabitants as to 2007 according to the latest census (Censo de Población y Vivienda 2007). By the time of the arrival of the Spanish, Santo Domingo de Guzmán was populated by Pipil-speaking peoples and remained predominantly monolingual in Pipil until at least the 19th century (Lara 2005: 3). In present times, Santo Domingo de Guzmán is very likely the town with the highest concentration of Pipil speakers in El Salvador (Lemus 2010: 55; CONCULTURA 2003: 14; Campbell 1985: 2), although the exact number of speakers is unknown. In conversation, the consultants estimated around 30 Pipil speakers with different levels of proficiency in Santo Domingo de Guzmán alone.

Although dialectal differences in Pipil have barely been documented and much work remains to be done to identify regional isoglosses and individual traits for the modern dialects, Campbell (1985: 14) and King (2012) have characterized SD Pipil as featuring:

1. Voicing and sometimes fricativization of /k/ word-initially and between sonorant segments¹².
2. The use of some lexical items that are unique to this dialect and sometimes shared with other neighboring varieties; for example, SD has *maya* ‘only,’ where all other dialects have *semaya*. SD has *an* ‘today, now,’ where all other dialects have *ashan* or *ashkan*. It must be noted that all varieties of Pipil are thought to be mutually intelligible (Schultze-Jena & King 2012: 14).

¹²Note, however, that this alternation hasn’t been properly documented and it seems that it is also morphologically conditioned.

2.2.5 Grammatical Sketch¹³

Pipil is a VO language with agglutinative verb morphology. The different person prefixes, listed in Table 4, are added to the verb root, as seen in (1)-(2). Verbs with plural subjects additionally take the plural suffix *-t* in most tenses.

Table 4. Person prefixes and number suffixes in Pipil. Source: Campbell (1985)

Number	Person	Prefix	Suffix
Singular	1	<i>ni-</i>	<i>-∅</i>
	2	<i>ti-</i>	
	3	<i>∅-</i>	
Plural	1	<i>ti-</i>	<i>-t</i>
	2	<i>an-</i>	
	3	<i>∅-</i>	

(1) *ni-chuka-∅*
 1S-cry-∅
 ‘I cry’

(2) *∅-chuka-t*
 3PL-cry-PL
 ‘They cry’

Most Pipil verbs belong to one of two major classes: intransitive or transitive.

Intransitive verbs only take the subject prefixes; transitive verbs additionally take an object prefix.

¹³This is a brief summary of the grammatical features of Pipil relevant to the discussion of spatial language.

Nine tenses (which also include aspect and mood categories) have been described for modern Pipil (King 2012: 104), each one characterized by distinct suffixes. Only the present and the participle are listed in Table 5.

Table 5. Endings for the present and participle tenses. Source: Campbell (1985)

	Singular ending	Plural ending
Present	<i>-∅</i>	<i>-t</i>
Participle	<i>-tuk</i>	

Non-possessed nouns in Pipil usually feature the absolutive suffixes *-t* or *-ti*, although many nouns have *-∅*. Plurality in non-human nouns is usually marked by reduplication and in human nouns by suffixation. In Pipil, possession is expressed by means of the possessive prefixes in Table 6.

Table 6. Possessive prefixes in Pipil. Source: Campbell (1985)

Singular Possessor	Plural Possessor
<i>nu-</i> 'my'	<i>tu-</i> 'our'
<i>mu-</i> 'your'	<i>anmu-</i> 'your'
<i>i-</i> 'his/her/its'	<i>in-</i> 'their'

A possessive prefix coreferences the possessor and agrees with it in number, as in (3)-(4).

- (3) *ne i-pelu ne takat*
 the 3SG.POSS-dog the man
 “The man’s dog”

- (4) *ne in-kal* *ne taka-met*
the **3PL.POSS**-house the man-**PL**
‘The house of the men’

2.2.6 Relational Nouns in SD Pipil

In Pipil, locative meaning is generally expressed by means of relational nouns, a term widely used in the Mesoamerican literature. Relational nouns behave like common nouns in that they take possessive prefixes that exist in coreference with the possessor, or the Ground in locative sentences, as can be seen in (5)-(6):

- (5) *ne mishti nemi tu-jpak*
the cloud LOC **1PL.POSS**-on
‘The cloud is over us’
- (6) *ne kwawit nemi i-nawak* *ne tiupan*
the tree LOC **3SG.POSS**-near the church
‘The house is near the church’

CHAPTER 3: METHODOLOGY

3.1 Native Speakers

Linguistic fieldwork took place in Santo Domingo de Guzmán in August of 2013 with the collaboration of 4 Native Speaker Consultants (NCS), three females and one male. All of them were born in Santo Domingo de Guzmán, learned Pipil from their parents, and are bilingual in Spanish and Pipil. The youngest speaker, a woman, was 55 years old, while the oldest speaker, a man, was 83. With the exception of the oldest consultant, the informants were not fully proficient in writing and reading. The youngest consultant has worked as a Pipil teacher in the local school as part of the language revitalization program promoted by Universidad Don Bosco (Lemus 2008).

3.2 Stimuli

Data were gathered by means of individual elicitation sessions conducted for the most part in Pipil and using a variety of printed stimuli and real-life objects. Among the stimuli for documenting topological relations, I used the “BowPed” Topological Relation Picture Series (Bowerman & Pederson 1992). BowPed has been tested in different fieldwork sites all over the world and thus allowed for controlled comparison with other languages and with the theoretical claims made by Levinson and Wilkins (2006), as their space semantics typology draws heavily from the results obtained by using this collection of images in different languages.

This picture series depicts several objects in a variety of spatial arrangements. In every image, one of the objects is highlighted in yellow. The objective is to elicit an utterance describing the location of the highlighted object in terms of its relation with the non-highlighted objects in the image. The stimuli in the BowPed image series are numbered (see Appendix 3) and arranged in a random order (that is, contiguous stimuli for the most part depict very different spatial configurations). Each stimulus was printed onto an individual piece of paper, size A4.

The procedure for all elicitation sessions was as follows: first, native speakers were shown a given stimulus for 10 seconds. Then, stimulus still at hand, they were asked to identify the objects in each picture by answering the question asked in Pipil:

(7) *tay ti-k-ita ka nikan*
what 2SG.A-3SG.O-see at here
'What do you see here?'

Once the objects in each picture were identified, consultants had to identify the position of the highlighted object in each image by answering the question:

(8) *kan nemi ne X*
where LOC the X
'Where is the X?'

Where X stands for the name of the highlighted object in the image. All the responses by the native speaker were recorded and elicitation followed the original numerical order in the BowPed series. Not all BowPed images were used in this study, however, as some of the items portrayed were alien to the material culture of the consultants and a source of undesired confusion (See Appendix 3).

After eliciting utterances describing all items in BowPed, native speakers were given a 10-minute break followed by the next set of stimuli. In order to document frames of reference in SD Pipil, I used the images in the *Ball and Chair* picture series from the MesoSpace Field Manual by Jürgen Bohnemeyer (2008) (See Appendix 4 for a list of used images). As in the BowPed image series, stimuli in the *Ball and Chair* picture series were randomized and numbered, and they were presented to the native speakers in their original order, each one printed in an individual piece of paper. The methodology used for this component of my research was very similar to that illustrated in (8): speakers were shown each stimulus for 10 seconds and asked to identify the position of the ball in terms of its relation with the chair by answering the question:

- (9) *kan nemi ne pelotaj*
 were LOC the ball
 ‘Where is the ball?’

Again, all the responses by the native speaker were recorded. Another 10-minute break followed this second series of questions. In order to disambiguate the semantics of some relational nouns and define them with more precision, I used a combination of stimuli consisting of images from other sources, images created by me, and groups of real-life objects such as stones and griddles (see a list of these stimuli in Appendix 5). They were printed in individual pieces of paper. In this third round of questions, I showed each stimulus to speakers for 10 seconds and asked:

- (10) *ni-weli n-ina ka ne X nemi Y*
 1SG-can 1SG-say that the X LOC Y
 ‘Can I say that the X is Y?’

Where X was the name of an object and Y was a locative predicate including one relational noun. The purpose of this methodology was to assess the situations in which speakers accepted the use of one relational noun with locative meaning and rejected the use of others. Elicitation sessions were recorded with a digital audio recorder.

In total, I used around 100 different visual stimuli and recorded around 395 utterances from the Pipil native speakers.

3.3 Pipil and Nahua Written Sources

Most of the examples used in this work were obtained first-hand during my fieldwork in the summer of 2013. However, it is important to list some of the most important Pipil written sources that are relevant to this study.

-*The Pipil Language of El Salvador* by Lyle Campbell, published in 1985, presents the results of his fieldwork in El Salvador during the 1970s. It includes a grammar sketch, an extensive Pipil-English-Spanish vocabulary, and some texts.

-*Ne Tajtaketza Pal Ijtzalku* (Schultze-Jena & King 2012) is a revised edition by Alan King of the most important work in the Pipil corpus: the texts on a wide array of topics that the German linguist Leonhard Schultze-Jena collected from Ynés Masin and other anonymous Pipil speakers in the Salvadoran municipality of Izalco in 1930. This text is only in Pipil.

Additionally, different sources on other modern and extinct Nahua languages are used for comparison purposes. Whenever a given example was taken from any source other than my fieldwork, it will be duly indicated.

CHAPTER 4: THE SEMANTIC DOMAIN OF SPACE

4. 1 Semantic Typology and Space

Semantic typology is the branch of linguistic typology that studies the vast diversity in expression of meaning across languages in order to find the underlying regularities and universal patterns within it. Compared with other typological studies in linguistics, such as phonological and syntactic typology, it has been a relatively neglected field. Pioneering works in semantic typology with comparative cross-linguistic approaches were in fact originally carried out by anthropologists and ethnobiologists studying kinship terminologies (Morgan 1997/1871), color terms (Berlin & Kay 1969), and taxonomical classifications of plants and animals in different languages.

Most modern works in semantic typology consider a given function in language ('what are the terms for colors?' for example) and asks how different languages satisfy it and by what formal means, with the goal of identifying patterns among them. As semantic typology has a cross-linguistic and comparative scope, it requires more control in the methodology used for data collection to allow for more precise comparisons across very different languages (Levinson & Wilkins 2006: xv).

This methodology is clearly illustrated in the collection of spatial language descriptions compiled by Levinson & Wilkins (2006), the most thorough recent effort to study the semantics of space in different languages within a typological framework. As part of this project, a group of linguists, sharing the same elicitation techniques and most stimuli in order to ensure that the

descriptions remained closely comparable, did fieldwork in 12 different languages (See Figure 3) guided by a very specific functional base or question: document how speakers of different languages belonging to diverse language families around the world answer ‘Where’-questions.

Figure 3. Language sample in the space semantics study.

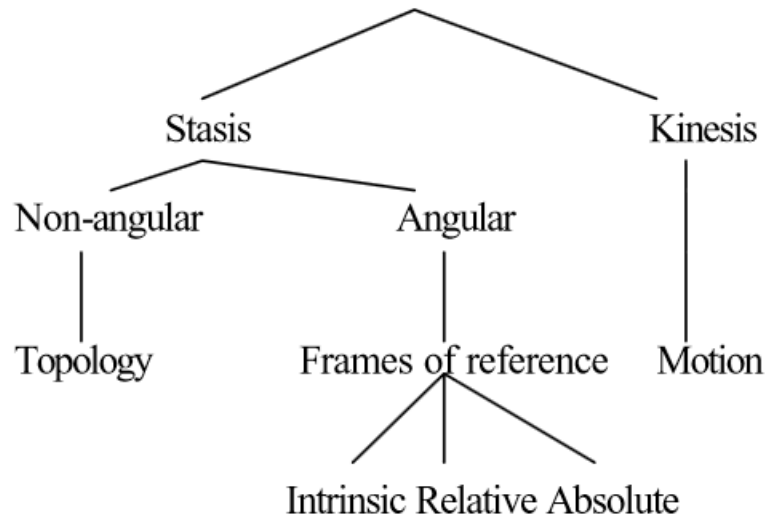
Source: Levinson & Wilkins (2006)

Language	Language affiliation	Country where research was done	Number of native speakers
Arrernte (Eastern and Central)	Australian, Pama-Nyungan	Australia	2,000
Jaminjung	Australian, non-Pama-Nyungan	Australia	100
Warrwa	Australian, non-Pama-Nyungan	Australia	2
Yélf Dnye	Papuan, Isolate	Papua New Guinea	4,000
Kilivila	Austronesian	Papua New Guinea	23,000
Tzeltal	Mayan	Mexico	200,000
Yukatek Maya	Mayan	Mexico	800,000
Tiriyó	Cariban, Taranoan	Brazil, Surinam	2,000
Ewe	Niger Congo, Kwa	Ghana	2,000,000
Tamil	Dravidian	India	70,000,000
			(world-wide)
Japanese	Isolate? / Altaic?	Japan	118,000,000
Dutch	Indo-European, Germanic	Netherlands	15,000,000
			(in the Netherlands)

Upon analysis of the results, Levinson & Wilkins (2006: 3) proposed two main conceptual subdomains within the space domain (See Figure 4): stasis (pertaining spatial description of static objects) and kinesis (pertaining spatial description of objects in movement). The stasis subdomain is further divided into ‘topology,’ applying to those situations in which the objects in a spatial description coincide in space or are or close proximity, making angular discriminations irrelevant or not required, and ‘frames of reference,’ applying to those situations in which objects are separated in space and it becomes necessary to use a coordinate system to specify angles or directions in order to locate them (Levinson & Wilkins 2006: 541).

Figure 4. Conceptual subdivisions of the spatial domain.

Source: Levinson & Wilkins (2006)



In this study, I will focus on the description of the stasis subdomain of the spatial domain in SD Pipil, comprising topology and frames of reference.

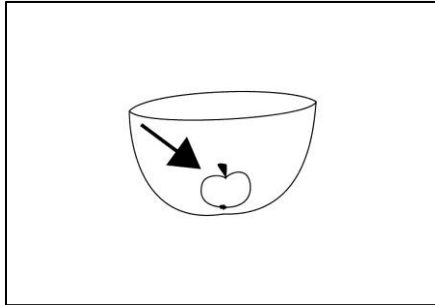
4.2 The Basic Locative Construction (BLC) and the BLC Hierarchy

Data comparability is a key issue in semantic typology. In order to ensure that the results from very different languages remained as closely comparable as possible, the team of linguists that worked on space semantic typology (Levinson & Wilkins 2006) parted from a common functional base: documenting how speakers of different languages answer ‘Where’-questions. This methodology determined the introduction of the Basic Locative Construction (BLC), a key concept for discussing the stasis subdomain in language.

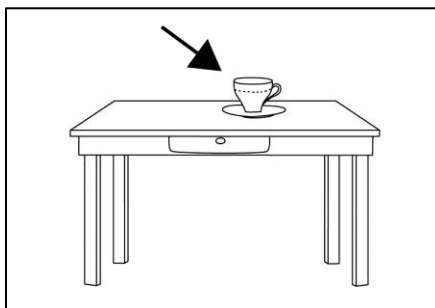
The BLC has been defined as the most common sentence in response to a question of the form ‘Where is the X? As all human languages appear to have ‘Where’-questions, BLCs are very useful functional frames that allow for comparing elements with the same function across languages (Levinson & Wilkins 2006: 15). In space description, there are two basic notions first

introduced in linguistics by Talmy (1972: 11), known as the *Figure* and the *Ground*. The Figure is the entity situated with respect to another entity, known as the Ground (Talmy 2010: 311; Levinson & Wilkins 2006: 3).

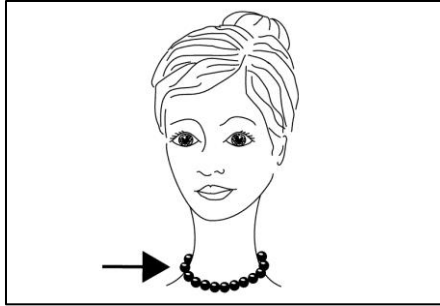
Examples in (11)-(13) illustrate the BLCs used to describe three spatial configurations in Japanese (isolate), Tzeltal (Mayan), and Dutch (Indo-European), respectively:



- (11) Japanese: *ringo-wa booru-no naka-ni a-ru*
 apple-TOP bowl-GEN in-DAT be-PRS
 ‘The apple is in the bowl’ (Kita 2006: 439)



- (12) Tzeltal: *pachal-Ø ta ba mexa te ala baso-e*
 bowl_shaped_sitting-3A PREP top table ART DIM cup-CL
 ‘The little cup is sitting on the top of the table’ (Brown 2006: 245)



- (13) Dutch: *de ketting zit om de nek van de vrouw*
the necklace sits around the neck of the woman
'The necklace is around the neck of the woman' (Staden, Bowerman & Verhelst 2006: 486)

One of the most important typological findings by Levinson and Wilkins (2006: 516), upon analysis of the data from the 12 languages in the sample, is that the BLC seems to be the preferred construction for describing certain spatial scenes in the BowPed image series, while other spatial scenarios tend to be described by using other contrastive types of constructions, such as resultative constructions that describe the position of the Figure rather as the result of the completion of an event. They found that scenes identified with a prototypical setting of a small, inanimate, independent, and manageable object in close proximity to a larger and immobile Ground object (such as a cup on a table or an apple in a bowl), were more likely to prompt a BLC from speakers (as those illustrated in (11)-(13)), while scenes deviating from this setting, especially those featuring an animate Ground, or those in which the Figure is strongly attached to the Ground (such as a ring on a finger, or a stamp on an envelope) were more likely to be described using resultative constructions, such as 'she is wearing a ring' or 'someone put a stamp on the envelope.'

Levinson & Wilkins (2006: 519) argue that the degree to which speakers of a given language extend the use of the Basic Locative Construction to cover even non-prototypical situations is language-specific and works as an implicational hierarchy: “any language that uses the BLC for scene *i* will also use it for *j*, where *i* is higher in the scale than *j*” (Levinson & Wilkins 2006: 514). The authors selected eight representative pictures from the BowPed image series (see Figure 5) that had maximal contrasts in contact/non-contact, attachment/non-attachment, and Figure/Ground alternations to model how this cross-linguistic hierarchy worked in different languages (Figure 6).

Figure 5. Cardinal scenes for the BLC hierarchy.

Source: Levinson & Wilkins (2006)

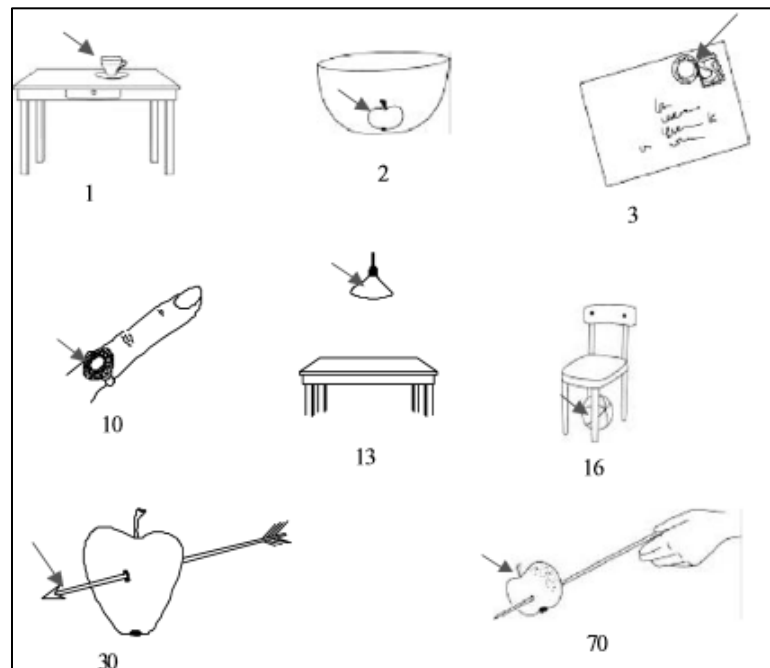


Figure 6. Implicational BLC hierarchy across topological space.

Source: Levinson & Wilkins (2006)

Animate-Ground > *Figure-Pierced* > *Ground-Pierced* > *Adhesion* > *Core-Scenes*
 ring on finger > apple on skewer > arrow in apple > stamp > cup on table,
 fruit in bowl
 lamp over table,
 ball under chair

In Japanese, for example, speakers would use the BLC to describe only the prototypical core-scenes in the hierarchy (Cup on table, Fruit in bowl, Lamp over Table, Ball under Chair); all scenes of adhesion and beyond would be described using alternate constructions (Kita 2006: 474). In contrast, Tzeltal speakers use the BLC to cover all scenes up to Figure-Pierced situations, and use other constructions for spatial scenes higher in the scale (Levinson & Wilkins 2006: 558). On the other extreme, languages like English or Dutch (Staden, Bowerman & Verhelst 2006: 486), can apply their BLCs to describe all the situations in the scale.

4.3 Typology of Locative Predicates

Languages differ greatly in the structure of their BLCs. However, building from the data in Levinson & Wilkins (2006), Ameka and Levinson (2007: 863) argue that locative predicates can be classified into four main categories according to the morphosyntactic elements in them, proposing the following typology of locative predicates:

Figure 7. Four basic types of locative predication in an unmarked locative statement.

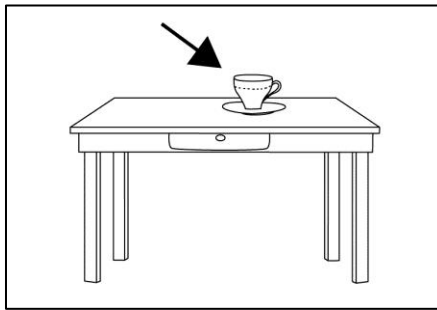
Source: Ameka & Levinson (2007)

Type 0	No verb in basic locative construction: Saliba.
Type I	Single locative verb (or suppletion under grammatical conditioning): Type Ia: Copula (dummy verb used in many other constructions): English, French.

Type II	Type Ib: Locative (+Existential) verb: Japanese, Yukatek.
Type III	A small contrastive set of locative verbs (3–7 verbs): Arrente, Dutch.
Type III	Multiverb positional verbs (a large set of dispositional verbs, 9–100): Tzeltal, Zapotec, German, Laz, Likpe.

The different categories of the Ameka & Levinson typology of spatial predicates are illustrated in (14)-(22).

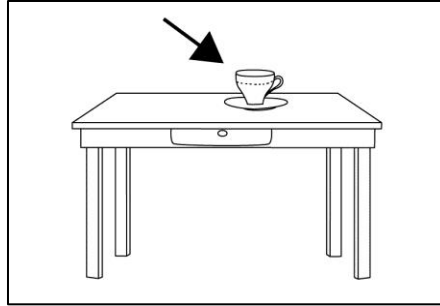
Saliba (Austronesian) is a Type 0 language (no verb in its BLC). The generic postposition *unai* is only inflected for the number of the Figure in the sentence:



- (14) Saliba: *kaputi-wa iya ede tebolo-ne unai*
cup-TOP 3SG PRSUP table-DET POSTP.SG

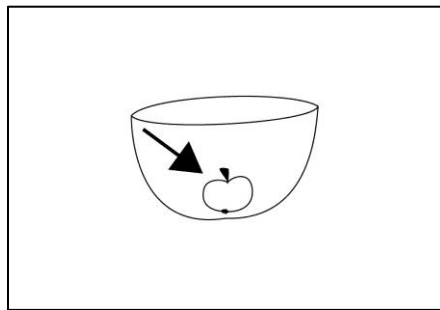
‘The cup, it is on the table’ (Dunn, Margetts, Meira & Terril 2007: 875)

Type I languages feature only one locative verb. It has been argued that this type of spatial predication is perhaps the least common among the languages of the world (Ameka & Levinson 2007: 856). Type I is further subdivided into Type Ia and Type Ib. French (Indo-European) is a Type Ia language, as it features a copula in its BLC which is also used in many other types of constructions (such as equative constructions):



- (15) French: *la tasse est sur la table*
 DEF.FEM cup is on DEF.FEM table
 ‘The cup is on the table’ (Fortis 2010: 1)

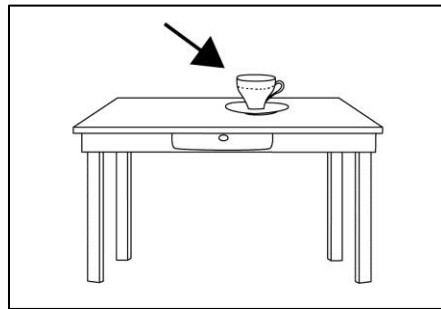
Type Ib languages feature a single locative verb in their BLCs. Some languages feature more than one locative verb and their usage is determined by grammatical categories. For example, Japanese (isolate) features two locative verbs in its BLC: *i-ru* for animate Figures and *a-ru* for inanimate ones:



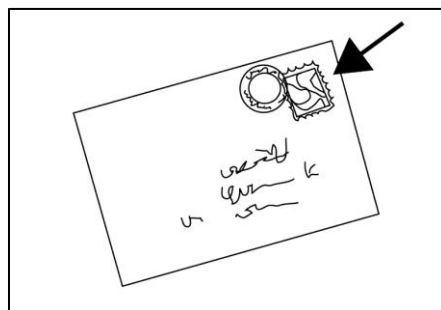
- (16) Japanese: *ringo-wa booru-no naka-ni a-ru*
 apple-TOP bowl-GEN in-DAT be-PRS
 ‘The apple is in the bowl’ (Kita 2006: 439)

Dutch (Indo-European) is a prototypical Type II language in the Ameka & Levinson typology of locative predicates. Languages in this category feature a small and contrastive set of locative verbs (usually between 3 and 7) that are usually derived from human posture verbs, such

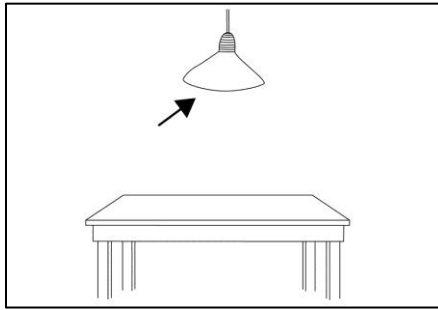
as ‘stand,’ ‘sit,’ and ‘lie’ (although less anthropomorphic positionals such as ‘hang’ are also common). The choice of a given locative verb in a locative construction depends on the abstract geometrical properties and the orientation of the long axis of the Figure object (which is also the subject of the verb): ‘stand’ is used when the long axis is vertical, ‘lie’ is used when the long axis is horizontal, ‘sit’ is used when there is no major axis, and ‘hang’ is used when Figures are not supported from below. Languages in this category sometimes feature a general locative verb that can be used if more specific positionals are not relevant or when dealing with abstract nominals and large scale space location (Ameka & Levinson 2007: 858). The use of these locative positional verbs in Dutch (Indo-European), describing scenarios in the BowPed series, is illustrated in (17)-(19):



- (17) Dutch: *het kopje staat op de tafel*
 the cup.DIM **stands** on the table
 ‘The cup is (stands) on the table’ (Staden, Bowerman & Verhelst 2006: 487)

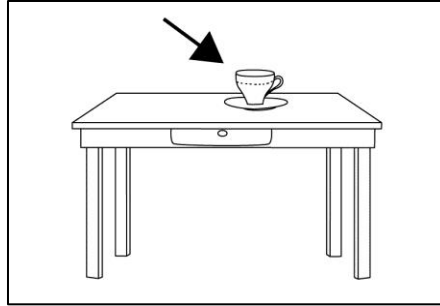


- (18) Dutch: *de postzegel **zit** op de envelop*
the stamp **sits** on the envelope
'The stamp is (sits) on the envelope' (Staden, Bowerman & Verhelst 2006: 486)

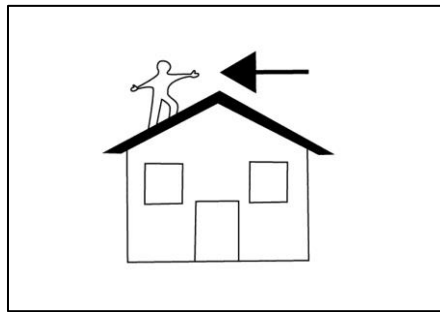


- (19) Dutch: *de lamp **hangt** boven de tafel*
the lamp **hangs** above the table
'The lamp is (hangs) above the table' (Staden, Bowerman & Verhelst 2006: 487)

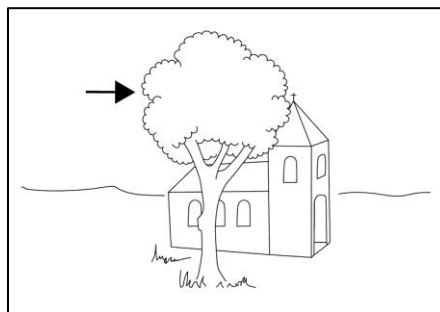
Languages belonging to Type III in the Ameka & Levinson typology feature a very large number of locative positional verbs in their BLCs. Tzeltal (Mayan), for example, has 200 positional verbs that convey very precise information about the shape and position of the Figure in a spatial description (Ameka & Levinson 2007: 847). For example, the verb root *tek'el* is applied to standing human Figures or animal Figures on their hind legs, the verb *tekel* is used when the Figure is a tree standing on its own roots, and *pachal* is applied to standing inanimate bowl-shaped Figures. The use of some of these locative verbs is illustrated in (20)-(22):



- (20) Tzeltal: *pachal-ø ta setz' baso*
 bowl.sitting-3A PREP plate cup
 'The cup is sitting at (i.e. on) the plate' (Brown 2006: 247)



- (21) Tzeltal: *kajal-ø ta s-ba na (te winik-e)*
 mounted.on-3A PREP 3E-top house (ART-man-CL)
 'He (the man) is on top of the house' (Brown 2006: 247)



- (22) Tzeltal: *tekel-ø ta s-tz'eel eskwela te'*
 standing.tree-3A PREP 3E-side school tree
 'The tree is standing at the side of the school' (Brown 2006: 244)

4.4 The Elements of Locative Predicates

Grinevald (2006: 8) has detailed the morpho-syntactic elements that can be found in BLCs across languages as follows:

Figure 8. Inventory of morpho-syntactic elements of Basic Locative Constructions.

Source: Grinevald (2006)¹⁴

FIGURE	SPATIAL RELATION		GROUND
Noun Phrase (NP)	LOCATIVE PREDICATE	ADPOSITION	NP
	-SIMPLE LOCATIVE PREDICATES locative verbs posture verbs positionals -SATELLITES preverbs verbal particules directionals -BI-PARTITE STEMS		

The *Figure* and *Ground* elements in Grinevald's inventory refer to the two essential cognitive functions in space description first introduced in linguistics by Talmy (1972: 11). Simply put, the Figure is the entity situated with respect to another entity, known as the Ground (Talmy 2010: 311; Levinson & Wilkins 2006: 3). The Spatial Relation element features a locative predicate and adpositions, a category that includes prepositions and postpositions, as well as case endings and relational nouns (Grinevald 2006: 9). Verbs of the kind 'sit,' 'stand,' 'squat,' and 'hang' are called *positional verbs*. Ameka and Levinson (2007: 854) hypothesize that languages that rely on very developed positional verb systems for spatial location (those belonging to Type III in their typology, such as Tzeltal) tend to feature weak directional

¹⁴The constituent order of this table is not particularly relevant (Grinevald 2006: 8).

specifications: for instance Tzeltal features only one preposition. On the other hand, languages with extensive adpositional systems tend to be less dependent on positional verbs.

In the following pages, I will describe the BLC in SD Pipil and compare it against these proposed typologies of space description.

CHAPTER 5: THE TOPOLOGY SUB-DOMAIN IN SD PIPIL:

THE BASIC LOCATIVE CONSTRUCTION

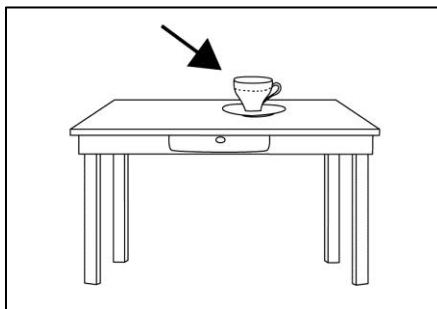
5.1 BLC in SD Pipil in Typological Perspective

As attested during fieldwork, the BLC template in SD Pipil, in its unmarked word order, is as follows:

Figure 9. BLC in SD Pipil¹⁵

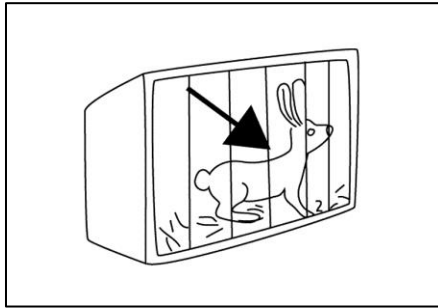
FIGURE	SPATIAL RELATION	GROUND
NP	<i>nemi</i> +(Positional Verb)+(ka)+Relational Noun	NP

In SD Pipil, a locative predicate consists of the obligatory locative verb *nemi* ‘to be, to exist,’ an optional positional verb in the participle form, an optional preposition *ka*, and an obligatory adposition, which is usually a relational noun and sometimes a preposition with locative meaning. The BLC in Pipil is illustrated in (23)-(24):



¹⁵Elements in parentheses are optional.

- (23) *ne tasaj nemi i-jpak ne patznaj wan ij-ikshi*
 the cup LOC 3POSS-on the plank with REDUP-leg
 ‘The cup is on the table’



- (24) *ne konejoj nemi mu-es-tuk ijtik ne jawlaj*
 the rabbit LOC REFL-sit-PART inside the cage
 ‘The rabbit is sitting inside the cage’

The optional use of the preposition *ka* before a relational noun with locative meaning, see (25), was already documented by Campbell (1985: 60). He defines *ka* as meaning ‘to, in, at, where, where?’ (Campbell 1985: 257). This preposition is also used in temporal constructions (King 2012: 80), as in (26). King argues that there are not any differences in meaning between constructions with *ka* and without *ka*, and considers them to be basically synonyms (King 2012: 80). It is interesting to note that only the male native speaker consultant, the oldest one, made extensive use of this construction and that the preposition *ka* only co-occurred with relational nouns having a possessive prefix, never with a preposition or forms without the possessive prefixes (see section 5.4).

- (25) *ne pelotaj nemi ka itan ne siyaj*
 the ball LOC at beneath the chair
 ‘The ball is beneath the chair’

(26) *nemanha ka tayua asi-k ne seuk*
 later at night arrive-PRET the other
 ‘Later at night, the other (man) arrived’ (Schultze-Jena & King 2012: 147)

Upon inspection of the BLC in SD Pipil, we can draw a few typological conclusions. SD Pipil is a Type Ib language in the Ameka & Levinson typology of locative predicates, identified as the least common type of locative predication among world languages (Ameka & Levinson 2007: 856); namely, it features a single locative verb *nemi* in locative constructions. It must be noted, however, that the functions of *nemi* seem to exceed the defining characteristic of locative verbs in Type Ib languages, namely that they appear only in locative predicates; indeed, *nemi* also functions as an auxiliary verb in progressive constructions such as (29). Nevertheless, I consider that there is enough evidence to classify SD Pipil as a Ib rather than a Type Ia language, which feature a copula that is used in BLCs and many other types of construction, as French or English.

First, the verb *nemi* is not used as a copula in equative sentences (Campbell 1985: 111); instead, the person prefixes (see Table 4) are attached to nouns and adjectives, as seen in (27). Second, the verb *nemi* in SD Pipil functions additionally as an existential verb, a function that has been found to be cross-linguistically characteristic of locative verbs in Type Ib languages such as Japanese (Kita 2006: 439), Yukatek Maya (Bohnmeyer & Stolz 2006: 290) and Ewe (Ameka & Essegbey 2006: 372); this is illustrated in (28). Finally, as an auxiliary in progressive constructions, *nemi* functions as an aspect marker and not as a copula.

(27) *naja ni-siwat*
 I 1S-woman
 ‘I’m a woman’

(28) *nemi miak kwaj-kwawit ø-ki-cha-t in-takil.*
EXIST many REDP-tree 3A-3O-make-PL 3PL.POSS-fruit
 ‘There are many trees that bear fruit’ (Schultze-Jena & King 2012: 21)

(29) *nemi ni-takwa*
 PROG 1SG-eat
 ‘I am eating (Campbell 1987: 272)

Although the most common constituent order in the BLC in SD Pipil is the one already discussed, it should be noted that displacements such as the one in (30), where the adposition and Ground are taken to the beginning of the sentence, are possible and common. These seem to be pragmatically motivated.

(30) *i-tajku ne kulal nemi ne kal*
 3POSS-middle the pen LOC the house
 ‘In the middle of the pen is the house’

5.2 BLCs in other Nahua Languages

There are no specialized studies on spatial language in other Nahua languages, making a comparative study difficult. However, scattered information in grammars of Classical Nahuatl, the language spoken by the Aztecs and the oldest attested relative of Pipil, provides insight into the particularities of spatial predication in this language and offer valuable evidence of a very different strategy to convey static spatial meaning:

“Nahuatl distinguished two senses of English ‘to be.’ The first (corresponding roughly to Spanish ‘ser’) is its use in a predicate nominative (‘I am a lord’) or predicate adjective (‘you are good’). (...) The second sense is ‘to be located’ (corresponding roughly to

Spanish ‘estar’). The verb *ca*¹⁶ is used for general location. The choice of the other three, *i’cac*, *onon*, and *mani*, depends on the shape and nature of the subject as viewed in the Nahuatl world.” (Sullivan 1988: 189)

The use of the general locative verb *ca*’ in Classical Nahuatl is illustrated in (31):

- (31) *ōmpa ilhuica-c ca-te’ in cī-citlāl-tin*
 there sky-at **LOC-PL** LNK REDUP-star-PL
 ‘Stars are there in the sky’ (Launey 1992: 116)

The locative verb *i’cac* ‘to be standing’ is applied to long things that are usually erect such as sticks, trees, and columns:

- (32) *i-cpac i’cac in yehuatl in cuauhtli*
 3POSS-on **LOC.to be standing** LNK 3SG LNK eagle
 ‘An eagle is (standing) on it (i.e.: a cactus)’ (Sullivan 1988: 194)

The verb *mani* ‘to be extended’ is applied to flat objects, such as books, blankets and paper, as well as to calm water, houses, and cities. According to Sullivan (1988: 197), it denotes ‘calmness, tranquility, and lastingness.’

- (33) *tezcatl i-cpac mani*
 mirror 3POSS-on **LOC.to be extended**
 ‘A mirror is (extended) on its head’ (Sullivan 1988: 199)

The verb *onoc* ‘to be lying down, stretched out, or seated’ was applied to long objects extended on the floor, such as planks, trunks, sticks, and plants, as well as to inhabitants of a place. Sullivan (1988: 195) argues that the basic meaning of the verb is ‘to be on the ground’:

¹⁶I have maintained the traditional Classical Nahuatl orthography for these examples. The’ after a vowel signals a glottal stop; *z* stands for /s/; *c* stands for /k/, except before *i*, when it is pronounced as /s/. Digraphs *hu* and *uh* stand for /w/.

- (34) *auh in oncan ono-ca in i-teopan*
 and LNK there **LOC.to be seated-PAST** LNK 3POSS-temple
 ‘And there was (sitting) his temple’ (Sullivan 1988: 197)

I argue that this data provide strong evidence that Classical Nahuatl belonged to a different category than SD Pipil in the Ameka & Levinson typology of locative predicates. Indeed, Classical Nahuatl seems to show all the traits of a prototypical Type II language, characterized by using small and contrastive sets of posture verbs in its BLC determined by the shape and posture of the Figure in a spatial configuration. The Classical Nahuatl system of locative verbs consisting of *i'cac* ‘to be standing,’ *onon* ‘to be sitting, lying,’ and *mani* ‘to be extending’ plus the verb for general location *ca'* is certainly similar to that found in Dutch as illustrated in (17)-(19).

Additionally, David Tuggy (personal communication, March 18, 2014), a specialist in two modern Mexican varieties of Nahua, Tetelcingo Nahuatl, spoken in the state of Morelos, in South-Central Mexico (Tuggy 1979: 5), and Orizaba Nahuatl, spoken in the state of Veracruz, in Eastern Mexico (Tuggy 1991: 1), informed me that a similar system of contrastive locative verbs is also used in these two Nahua varieties.

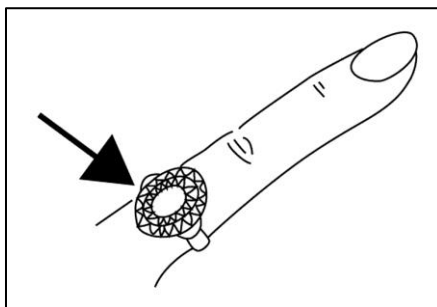
In Tetelcingo Nahuatl, the general locative verb is *ika*, often used in combination with locatives, as in *ipan-ka* ‘to be in.’ In Orizaba Nahuatl, the general locative verb is *kahki*. However, in the two languages, other verbs can be used in some circumstances: *mokāwa* ‘to be seated’ is used in Tetelcingo and Orizaba, *ihkatok* ‘to be standing’ and *pilōtok* ‘to be hanging’ are locative verbs used in Orizaba, while *pilkatika* ‘to be hanging’ is used in Tetelcingo. It must be recalled that ‘hang’ is one of the non-anthropomorphic postural verbs that are often featured

in languages belonging to Type II in the Ameka & Levinson typology of locative predicates (2007: 858).

Although more data from other Nahua varieties is needed before making stronger claims, the available information suggests that at least some Nahua varieties, extinct and modern, belong to Type II in the typology of locative predication. This finding, in turn, brings forth the question as to why SD Pipil uses such a different strategy of locative predication (namely, the use of only one locative verb in locative constructions). I argue in 5.4 that the influence of Spanish can be considered as a powerful candidate behind this development.

5.3 BLC Hierarchy in SD Pipil

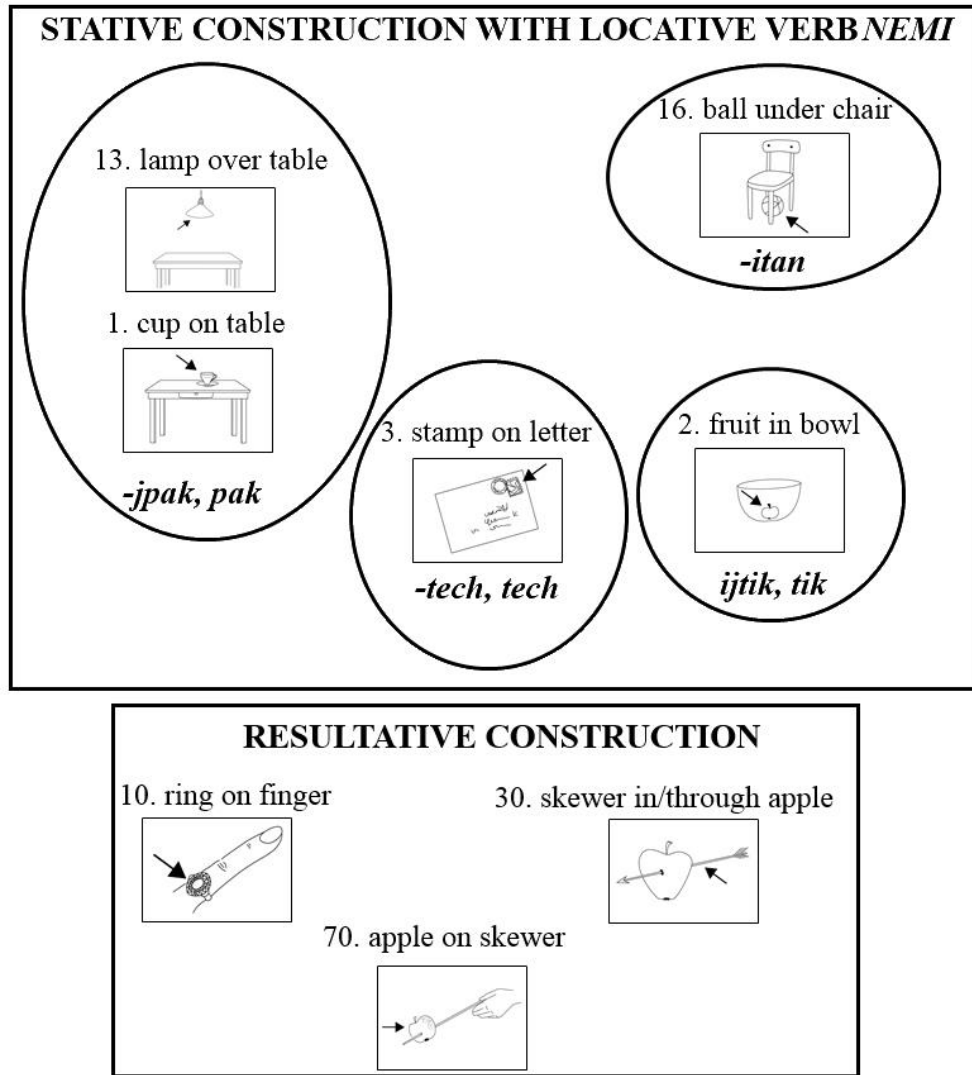
My fieldwork in SD Pipil yielded results that are in agreement with the BLC hierarchy proposed by Levinson & Wilkins (2006) and discussed in section 4.2; that is, SD Pipil speakers would consistently use the BLC to describe a certain group of situations (those that include the Core and Adhesion scenes. See Figure 6 in section 4.2) and use alternate constructions, similar to (35), for those in higher positions in the hierarchy:



- (35) *ne mapipil ki-pia ne anilloj*
the finger 3O-have the ring
'The finger has the ring'

This is illustrated in the following topolocial map:

Figure 10. Topolocial ‘map’ for SD Pipil



5.4 Relational Nouns, Prepositions and Spanish Influence in BLCs

As seen in section 2.2.6, locative meaning in SD Pipil is expressed by means of relational nouns. Relational nouns in Pipil take possessive prefixes that exist in coreference with the possessor (or the Ground in locative sentences). Nevertheless, during the elicitation sessions, speakers would usually omit the possessive prefixes of many relational nouns. In (36), for

instance, the possessive prefix *i-* of the relational noun *-tech* has been dropped, and in (37), not only is the possessive prefix *i-* missing, but also the glottal fricative of the relational noun *-jpak*:

(36) *ne pelu nemi tech ne i-kal*
the dog LOC near the 3POSS-house
'The dog is near its house'

(37) *ne takat nemi pak ne kal*
the man LOC on the house
'The man is on the house'

Out of 347 elicited sentences featuring relational nouns, 29% of them feature relational nouns without possessive prefixes. Relational nouns *-tech* 'on, near' and *-jpak* 'on, above' show the highest percentage of occurrence without prefixes: 45% of the times *-tech* was shortened to *tech* and 55% of the times *-ijpak* was pronounced as *pak*. These forms were particularly common among female NSCs and its occurrence was not predictable: speakers would use the form without a prefix in one sentence and the full relational noun in others. On the other hand, the only male consultant expressed that relational nouns without possessive prefixes should be considered ungrammatical.

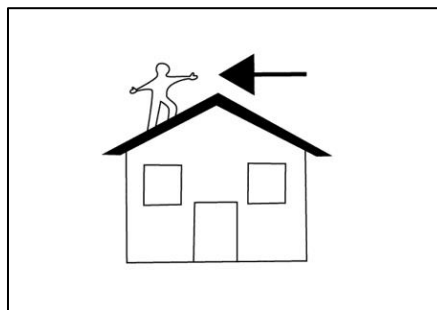
This situation has already been described by Campbell (1987: 269), who interprets it as evidence that, influenced by Spanish, relational nouns in modern Pipil are undergoing grammaticalization to resemble true prepositions of the Spanish type. On the same line, King (2012: 77) has stated that prepositions are "an emerging category" in Pipil. Although my findings agree with these views, a more detailed account of these phenomena is needed to fully assess the spread of prepositions in SD Pipil.

The development of prepositions out of relational nouns in Pipil is the latest innovation in the interesting history of locatives in Nahua languages, in which three main stages can be identified. Proto-Uto-Aztecan (PUA), the reconstructed common ancestor of all Uto-Aztecan languages (see Figure 2), was predominantly postpositional and all reconstructed locatives are indeed bound postpositions that are attached to nouns or pronominal elements (Langacker 1977: 94), as in the PUA postposition **-pa(-na)* ‘on.’ In a second stage, Nahua languages, which underwent extensive innovations due to contact with neighboring Mesoamerican languages (a process known as Mesoamericanization), acquired, among other things, the basic Mesoamerican pattern of locative *relational nouns* and for the most part abandoned the original PUA system of locative postpositions (Campbell 1987: 268), explained in 2.2.6 and illustrated in (5)-(6). Finally, in a change determined by intensive contact with Spanish, a fundamentally prepositional language, Pipil and other Nahua languages (Flores 2008) have started to develop prepositions from the original Proto-Nahuatl relational nouns. This chain of changes is clearly illustrated in the history of the reconstructed PUA locative postposition **-kupa* ‘in,’ which derived into the locative relational noun **-ikpak* ‘in, on’ in Proto-Nahuatl (Dakin 1982: 120), and finally derived into the pure locative preposition *pak* ‘on, above’ in Pipil and all its dialects (Campbell 1987: 269).

Besides determining the development of true preposition from relational nouns, I consider that there is enough evidence to support the claim that Spanish has influenced the very construction of locative predicates in SD Pipil. This argument is based on 1) traces of verbal locative roots in SD Pipil and 2) the nature and function of the verb *nemi*.

As shown in section 5.2, Classical, Tetelcingo, and Orizaba Nahuatl seem to belong to a different category than SD Pipil in the locative predication typology by Ameka and Levinson:

whereas these three varieties belong to Type II, SD Pipil belongs to Type Ib, the same as Spanish (Fortis 2010: 2). However, the existence of remnants in Pipil of the verbal locative roots found in Classical, Tetelcingo, and Orizaba Nahuatl suggest that locative predication in Pipil could have been similar in the past to that of these other varieties. As an illustration, Campbell (1985: 222) documents *ijkatuk* ‘standing,’ a defective verb found only in the participle in SD Pipil, and a variation *ejkatuk* is also found in numerous occasions in the *Tajtaketzal Ijtzalku* (Schultze-Jena & King 2012). These forms are clearly cognates with the locative verbs *ihkatok* ‘to be standing’ in Tetelcingo and Orizaba Nahuatl and *i'cac* ‘to be standing’ in Classical Nahuatl. During my fieldwork, I found that the form *ejkatuk* is used only as an optional posture verb (which are always in the participle form) in spatial predicates, unlike the verb *nemi*, which is mandatory. This use is illustrated in (38):



- (38) *ne takat nemi ejka-tuk i-jpak ne kal*
 the man LOC **to stand-PART** 3POSS-on the house
 ‘The man is standing on the house’

Traces of the other locative verbal roots are more subtle. For instance, a cognate of the general locative verbs *ca'*, *ika*, and *kahki* found in Classical, Tetelcingo, and Orizaba Nahuatl

respectively is found in Pipil *katka*, now an imperfective aspect particle in tense-aspect constructions (Campbell 1985: 272):

- (39) *ni-tumawak katka*
1SG-fat used to
'I used to be fat'

The Classical Nahuatl locative verb *mani* 'to be extending' has a cognate in SD Pipil in the transitive verb *-mana* 'to cook, to boil' (Campbell 1985: 334)¹⁷. I have not found any cognate form of the Classical Nahuatl verb *onoc* 'to be sitting, lying' in modern Pipil.

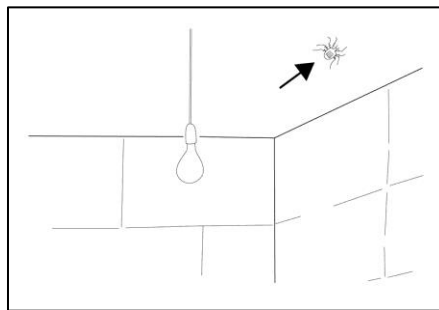
Another stronger argument is produced when we consider the nature and functions of the verb *nemi* in modern Pipil. It has been already noted that the verb *nemi* in Pipil shows considerable Spanish influence in its functions (Campbell 1987: 272). While in other Nahua languages the verb *nemi* means simply 'to live,' in modern Pipil its meaning has been glossed rather as 'to be, to exist' (King 2012: 200; Campbell 1985: 365), and its functions have come to closely mirror those of the verb *estar* 'to be' in Spanish. For instance, *nemi* is used as an auxiliary in progressive constructions much in the same way as the verb *estar* in Spanish, a usage that is not found in other Nahua varieties (Campbell 1987: 272)¹⁸. Compare, as illustration, the progressive clause in Pipil in (29) with its Spanish equivalent in (40):

¹⁷However striking, the cognate status of these forms is demonstrable. A very Uto-Aztecan trait found in Nahua languages is the existence of many pairs of intransitive/transitive verbs marked by the alternation of the vowels *-i* and *-a* suffixed to certain verbal roots (Stubbs 2010). Hence the Classical Nahuatl pair *mani* 'to be extended' and *-mana* 'to extend, put something on the floor.' This last form *-mana* could also mean 'to make tortillas' in Classical Nahuatl (Campbell 1985: 334), undoubtedly a cognate of Pipil *-mana* 'to cook, to boil,' the result of metonymy and semantic widening.

¹⁸Other Nahua varieties use *nemi* as an auxiliary for *ambulative* constructions meaning 'to go about doing something.'

- (40) *estoy com-iendo*
 1SG.be eat-GERUN
 ‘I am eating’

Moreover, the verb *nemi* in its locative function also closely parallels the use of *estar* in locative constructions in Spanish: “in sentences meaning ‘to be + location,’ where Spanish requires *estar* (not *ser*) ‘to be,’ Pipil always requires *nemi* (never \emptyset copula), showing the influence of the Spanish construction” (Campbell 1987: 272). Indeed, it could be said that the very structure of the BLC in SD Pipil mirrors the BLC in Spanish, not only in the order of the elements, but in the form requirements for the positional verbs, which must always be in the perfect participle. Compare, for instance, the locative predicate in SD Pipil in (41), found during fieldwork, with an example of the very similar Spanish BLC in (42):



- (41) *ne tukat nemi saluj-tuk tech ne tapepechul*
 the spider LOC stick-PART on the wall
 ‘The spider is stuck to the wall’

- (42) *el teléfono está pega-do a la pared*
 the telephone LOC stick-PART to the wall
 ‘The telephone is stuck on the wall’ (Werning 2014: 201)

I argue that the use of a sole locative verb in the BLC in SD Pipil, as well as the syntax and tense requirements of the optional positional verbs, show that spatial predication in SD Pipil has been heavily influenced by Spanish, a language in which there is also only one locative verb *estar* ‘to be’ and optional positional verbs must be in the participle. However, to strengthen this claim, it will be necessary to compare locative predicates in other Nahua varieties with a typological approach.

5.5 Positional Verbs

Overall, the use of positional verbs in SD Pipil agrees with the typological hypothesis by Ameka and Levinson. SD Pipil, featuring a fairly developed system of locative adpositions, does not require the use of positional verbs: only 82 or 21% of the elicited sentences feature a positional verb in the participle. However, I could attest that some relational nouns, especially *-tech* ‘on, near,’ do seem to prefer positional verbs more than others, as will be seen in the following sections.

CHAPTER 6: THE TOPOLOGY SUB-DOMAIN IN SD PIPIL:

SEMANTICS OF LOCATIVE RELATIONAL NOUNS

6.1 Introduction

Nahua languages feature an extensive system of relational nouns, many of which have a locative meaning and a complex morphology that allows for incorporation of other nominal roots, as in these examples from Classical Nahuatl (Andrews 1975: 482):

(43) *no-tech*

1POSS-on.

‘on me, touching me’

(44) *cal-tech*

house-on

‘against the side of the house, touching the side of the house’

Andrews (1975) lists around 24 relational nouns in Classical Nahuatl. In modern Pipil, however, the number of relational nouns with locative meaning has been reduced and its morphology simplified: relational nouns in modern Pipil can only take the possessive prefixes listed in Table 5 (Campbell 1985: 59). In Table 7, I compare the relational nouns I found during my fieldwork, 12 in total, with those documented by Campbell (1985), who was the first to systematically document all relational nouns with locative meaning in Pipil. In total, I elicited

347 utterances containing locative relational nouns and Figure 7 also lists the number of times I documented each relational noun during fieldwork:

Table 7. Relational nouns/prepositions with locative meaning in Campbell and own fieldwork

Reported by Campbell (1985)	Found in fieldwork in SD Pipil (2013)	Times elicited in fieldwork	Percentage of total
<i>ijtik, tik</i> ‘inside, in’	Yes	72	21.2%
<i>-ishpan</i> ‘in front of’	Yes	23	6.8%
<i>-ijpak, pak</i> ‘on, over’	Yes	63	18.5%
<i>-nakastan</i> ‘beside’	Yes	17	5.0%
<i>-nawak</i> ‘close to’	Yes	20	5.9%
<i>-tajku</i> ‘among’	Yes	6	1.8%
<i>-itan</i> ‘below’	Yes	16	4.7%
<i>-tech, tech</i> ‘beside, on’	Yes	86	25.3%
<i>-tzalan</i> ‘between’	Yes	8	2.4%
<i>-ipan</i> ‘behind’	Yes	19	5.6%
<i>-tzunpan</i> ‘on top of’	Yes	10	2.9%
<i>-ishtenpan</i> ‘in front of	No	-	
<i>-tankupa</i> ‘under,	No	-	
<i>-yejkan</i> ‘to the right	No	-	
Total		340	100%

None of the four native speakers knew the locatives *-ishtenpan* ‘in front of someone else,’ *-tankupa* ‘under, below,’ and *-yejkan* ‘to the right’ reported by Campbell. Additionally, I elicited the locative relational noun *-tzinu* ‘at the base of,’ which is discussed in King (2014: 4), a total of 7 times. In the following sections, I will discuss each individual locative found during fieldwork. The structure of each section will be as follows: first, I will present the gloss of the locative as documented by Campbell (1985), followed by examples found in the *Tajtaketzal pal Ijtzalku* (Schultze-Jena & King 2012), the longest and most important text in the Pipil corpus. In

the end, I will present the visual stimuli that were affiliated with each locative, as reported by at least two native speakers¹⁹.

6.2 Locative Relational Nouns in SD Pipil

6.2.1. *-jpak, pak*

The Pipil relational noun *-jpak* and its counterpart preposition *pak* are of very ancient origin and can be traced back to Proto-Nahuatl **ikpak* ‘in, on,’ which in turn is derived from the locative Proto-Uto-Aztecan postposition **-kupa* ‘in’ (Dakin 1982: 120). In Pipil, Campbell (1985, 223) defines the relational noun *-jpak* and *pak* as ‘on, on top of, over.’ The gloss suggests that this relational noun covers spatial situations in which the Figure is in contact with the Ground, and those in which the Figure is not in contact with the Ground. In the corpus, both *-jpak* and *pak* are attested and common, and it is clear that they can be used for both situations of contact between Figure and Ground, as in (45), and non-contact, as in (46):

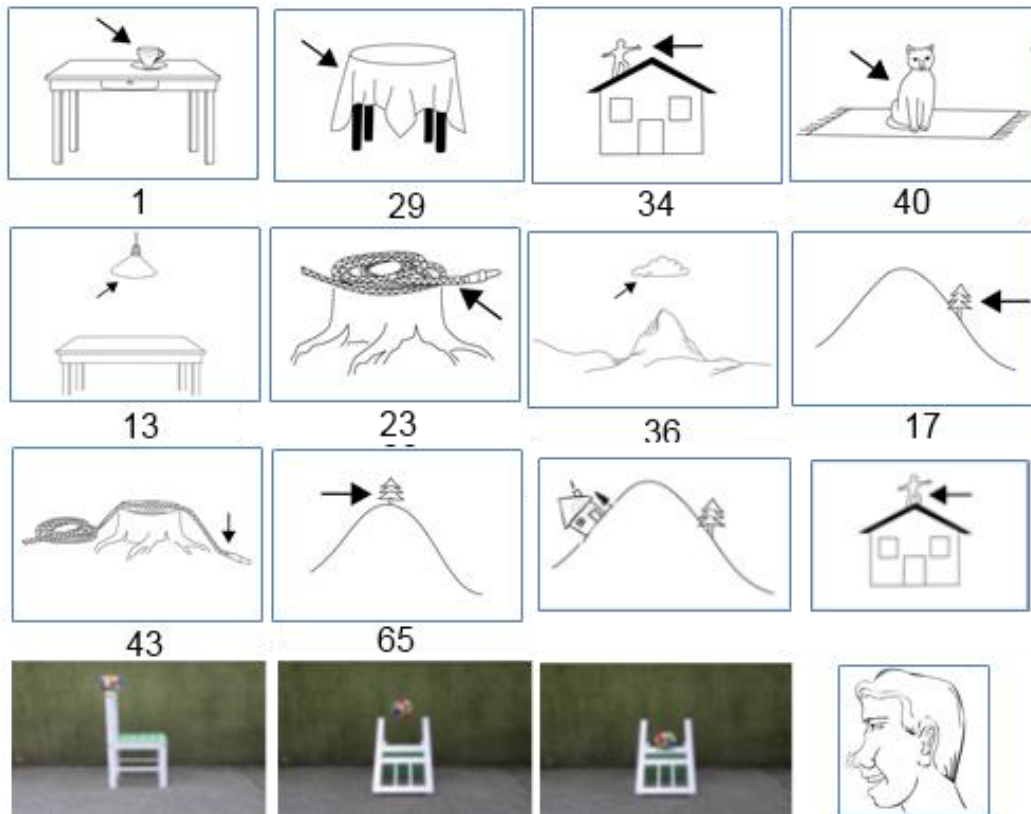
(45) *ti-mu-talia i-jpak ne mula*
 2SG-REFL-sit 3SG.POSS-on the mule
 ‘You sit on the mule’ (Schultze-Jena & King 2012: 142)

(46) *wan panuk i-jpak , inte ki-enchiw ne i-tzunpan ne kal*
 and pass 3SG.POSS-over NEG 3SG.O-touch the 3SG.POSS-top of the house
 ‘And it (i.e.: a stream of urine) passed over it (i.e.: a house), it did not touch the top of the house’ (Schultze-Jena & King 2012: 35)

¹⁹When a given stimuli belongs to the BowPed image series, it will have its identification number. The Figure is always signaled by a black arrow in these images. When a stimulus belongs to the *Ball and Chair* picture series, the Figure is always the ball. In miscellaneous stimuli, the Figure is always signaled by an arrow.

During my fieldwork, I could attest that both the relational noun *-jpak* and its equivalent preposition *pak* were common and used interchangeably, and they were used to describe both situations of contact and non-contact between Figure and Ground, as seen in Figure 11:

Figure 11. Stimuli affiliated with *-jpak*, *pak*



6.2.2. *-itan*

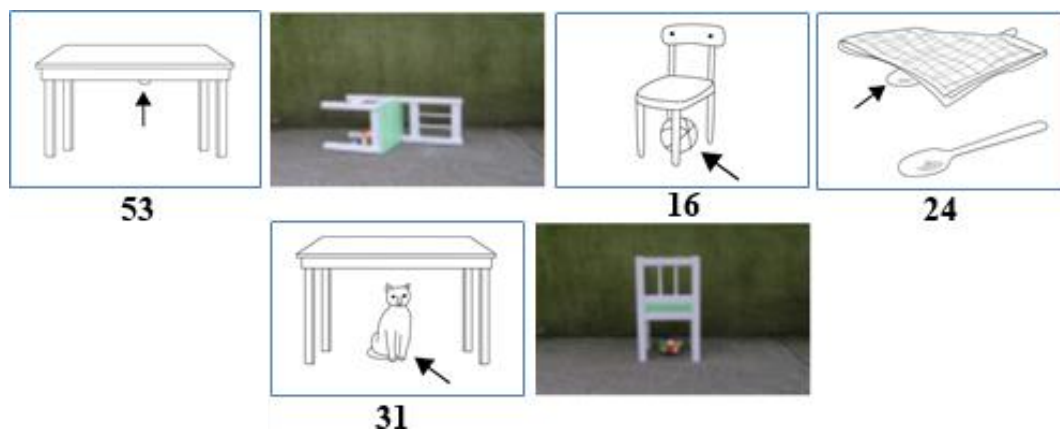
The relational noun *-itan* has a cognate in Classical Nahuatl *-tlani* ‘below’ (Campbell 1985: 458). Campbell glosses it as ‘below, under, beneath, underneath.’ While this author originally listed this relational noun as *-tan*, without the initial *i-*, King (2014: 4) has recently demonstrated that this *i-* does in fact belong to the root, as evidenced when used with other possessive prefixes:

(47) *nu-itan*
1SG.POSS-under
'Under me'

(48) *mu-itan*
2SG.POSS-under
'Under you'

Although the relational noun *-itan* does not appear in the *Tajtaketza pal Ijtzalku*, a related form *-tankupa* 'under, below,' also documented in Campbell (1985), is common. This absence could be explained once we consider that the texts in the *Tajtaketza* belong to Izalco Pipil, a different dialect than SD Pipil. It is possible that the relational noun *-itan* 'under, below' is a lexical item used mainly in Santo Domingo de Guzmán. During my fieldwork, I could attest that *-itan* applied to both situations of contact and non-contact between Figure and Ground, as illustrated in Figure 12:

Figure 12. Stimuli affiliated with *-itan*



6.2.3 *-tech, tech*

The relational noun *-tech* and its counterpart preposition *tech* have a cognate in Classical Nahuatl *-tech* 'in, of, on, near' (Campbell 1985: 480). Andrews (1975) derives it from a Proto-

Nahuatl nominal root **tech-* ‘side surface; contact; near of.’ In Pipil, Campbell (1985: 480) and King (2012: 82) glossed the relational noun *-tech* as meaning only ‘beside, near, next to, against,’ and thus seem to exclude the additional meaning of ‘in, of, on’ that is documented for Classical Nahuatl and that can be traced back to Proto-Nahuatl. However, during my fieldwork, I could attest that the locative meaning of *-tech* in SD Pipil does in fact cover both situations of attachment and lateral surface contact as well as *close* proximity, as is also suggested in the Classical Nahuatl cognate. As Campbell (1985) also did most of his fieldwork with speakers of SD Pipil, perhaps the more narrow definition of *-tech* found in his work can be interpreted as an unintentional omission rather than as an actual semantic narrowing of this locative relational noun in Pipil. More evidence is found in the corpus, as in the *Tajtaketzta pal Ijtzalku* both usages of surface contact and attachment, see (49), and close proximity, see (50), are well-attested:

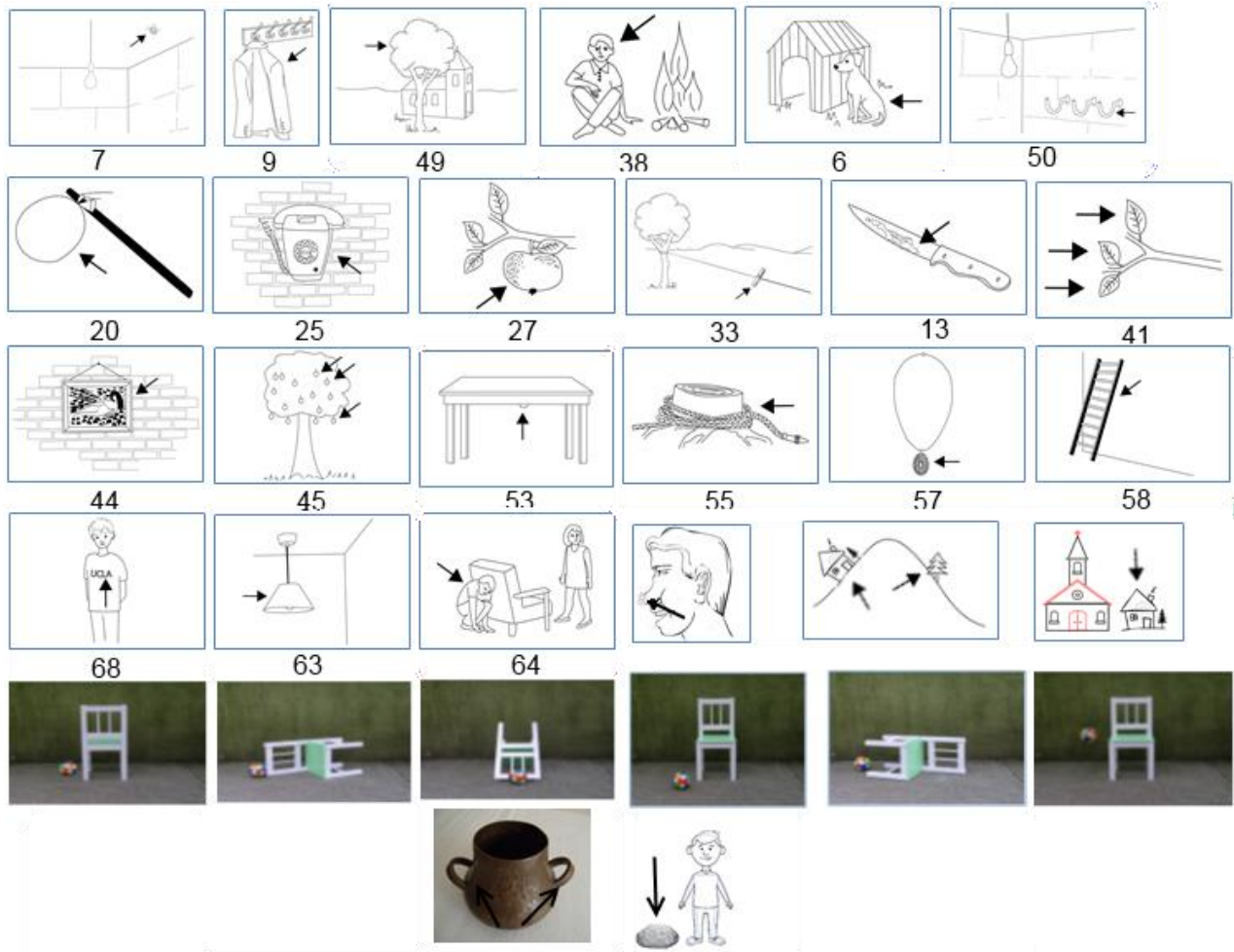
(49) *kwakuni mu-salu-k tech ne i-shulejyu*
 then REFL-stick-PAST **on** the 3SG.POSS-husband
 ‘Then, she (i.e.: a magical skull) stuck on her husband’ (Schultze-Jena & King 2012: 175).

(50) *kwakuni asi-k i-tech ne i-siwaw*
 then arrive-PAST **3SG.POSS-near** the 3SG.POSS-woman
 ‘Then he arrived near his wife’ (Schultze-Jena & King 2012: 112).

As already mentioned, in SD Pipil, positional verbs are optional in most BLCs, appearing in roughly 21% of all the elicited utterances. However, it is interesting to note that positional verbs appear in 65% of the locative constructions featuring the relational noun *-tech* (103 utterances in total). Among the documented positional verbs affiliated with configurations of surface contact are *kuwilantuk* ‘hanging,’ *kunaktuk* ‘stuck,’ *ilpituk* ‘tied,’ and *salujtuk* ‘stuck,

glued.’ In situations of close proximity, the positional verbs used are *ejkatuk* ‘standing,’ *kuyulijtuk* ‘squatting,’ and *muestuk*, ‘sitting.’ The preference for positional verbs with this locative may be explained by its particular semantics, as the additional postural information may be used to avoid potential ambiguity in spatial descriptions. The spatial configurations affiliated with this relational noun are illustrated in Figure 13:

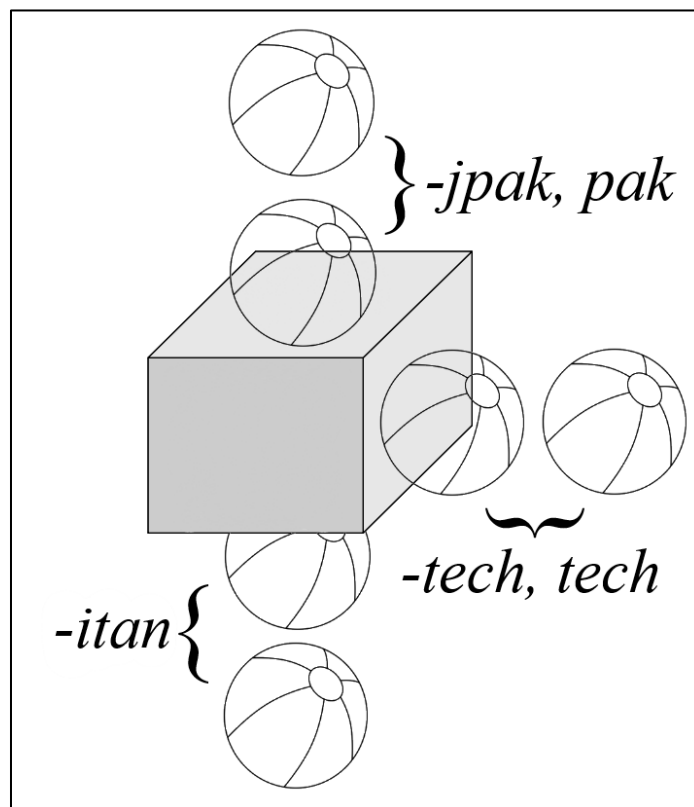
Figure 13. Stimuli affiliated with *-tech, tech*



As described in section 6.2.1 for *-jpak, pak* ‘on, over’ and section 6.2.2 for *-itan* ‘beneath, below,’ these relational nouns can be used in scenarios of both contact and non-contact between Figure and Ground. A similar situation has already been described for Japanese locatives *ue*

‘on/above’ and *shita* ‘below’ (Kita 2006: 447), for which contact between Figure and Ground is not relevant. These locatives have been called *absolute*, as they only convey information about the vertical relationship between Figure and Ground (Kita 2006: 447). In this sense, SD Pipil would illustrate an even more perfect and, to my knowledge, unique²⁰ example of an absolute system of locatives: not only does it not distinguish between *on* and *over*, and *below* with or without contact, it also does not distinguish between situations of close proximity and attachment/surface contact, as illustrated by the uses of locatives *-tech*, *tech*. Thus, it could be said that SD Pipil locatives convey absolute spatial relationships between Figure and Ground not only in the vertical axis, but also in the *horizontal* axis. This is illustrated in Figure 14:

Figure 14. Absolute locatives in SD Pipil



²⁰I haven't found any other language with a locative similar in its semantics to *-tech, tech* outside of the Nahua subfamily; however, I do expect most modern Nahua varieties to feature a similar system. Again, this is something that only specialized studies on spatial description in Nahua languages will elucidate.

6.2.4 *-ipan*

The relational noun *-ipan* is ancient and can be traced to the Proto-Nahuatl form **-pan*. Interestingly, the proto-form has been reconstructed as meaning ‘on’ (Dakin 1982: 160). In Pipil, however, Campbell (1985: 232) defines *-ipan* as meaning ‘behind,’ and it is this meaning the one I found in my fieldwork. As in *-itan*, the initial vowel does in fact belong to the root (King 2014: 4). Its use is attested in the *Tajtaketza pal Ijtzalku*:

- (51) *ka ipan ne teupan nemi-tuya se uji*
at **behind** the church LOC-IMPERF one road
‘Behind the church was a road’ (Schultze-Jena & King 2012: 51)

During my fieldwork, this relational noun was affiliated with the following spatial configurations:

Figure 15. Stimuli affiliated with *-ipan*



6.2.5 *-ishpan*

This relational noun consists of the roots *ish-* ‘face, eye’ and *-pan* ‘on.’ Campbell (1985: 246) defines *-ishpan* as meaning ‘before, in front of.’ Its use is well-attested in the corpus:

- (52) *ne siwapil nemi-a ejka-tuk ka ishpan*
the girl LOC-already stand-PART at **in front of**
‘The girl was already standing in front of him’ (Schultze-Jena & King 2012: 48)

During fieldwork, I found that *-ishpan* was affiliated with the following spatial configurations:

Figure 16. Stimuli affiliated with *-ishpan*



6.2.6 *-tzunpan*

This relational noun consists of the roots *tzun-* ‘hair, head’ and *-pan* ‘on.’ Campbell (1985: 538) glosses it as ‘on, on top of, on the summit.’ Its use is well-attested in the corpus:

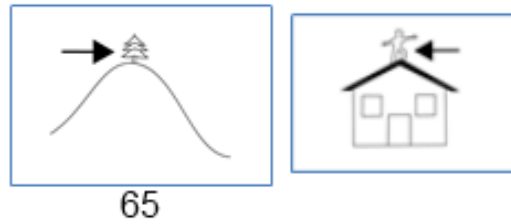
(53) *inte ki-enchiw ne i-tzunpan ne kal*

NEG 3SG.O-touch the 3SG.POSS-top of the house

‘It (i.e.: a stream of urine) did not touch the top of the house’ (Schultze-Jena & King 2012: 35)

During my fieldwork, I could attest that *-tzunpan* was only affiliated with scenarios in which the Ground featured a large prominence, such as mountains and houses, and the Figure stood on it. All spatial configurations described by *-tzunpan* can also be described by *-ijpak*, but the opposite is not always possible: I found that *-tzunpan* can only be applied to situations in which there is physical contact between Figure and Ground, as the native speakers reported that the situation depicting a cloud over the top of a mountain (number 36 in the BowPed series) could never be described by *-tzunpan*, only with *-jpak, pak*. The relational noun *-tzunpan* is affiliated with the following configurations:

Figure 17. Stimuli affiliated with *-tzunpan*

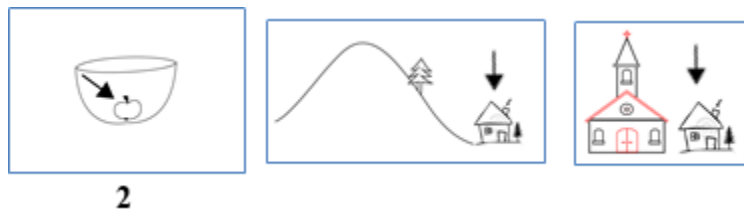


6.2.7 *-tzinu*

The locative *-tzinu* contains the root *tzin-* ‘buttocks, base, anus’ (Campbell 1985: 528). However, as a locative relational noun, it is not documented in Campbell (1985). King (2014: 3) recently identified it and glosses it as ‘beneath, at the bottom.’ It does not occur in the corpus.

During my fieldwork, I found evidence that its meaning could be better glossed as ‘at the base of, at the bottom of.’ This relational noun applied to situations in which the Ground was noticeable taller than the Figure, and the latter stood in its proximity or inside of it:

Figure 18. Stimuli affiliated with *-tzinu*



6.2.8 *-tzalan*

This relational noun has a cognate in Classical Nahuatl form *-tzalan* ‘between, in the middle of.’ In Pipil, Campbell (1985: 524) defines this relational noun as ‘between, among, in the middle of.’ It is an attested form, although rare (two occurrences), in the corpus:

- (54) *wan yaja pej-ki yawi in-tzalan*
 and 3SG begin-PAST go 3PL.POSS-among
 ‘And he began to walk among them’ (Schultze-Jena & King 2012: 126).

During fieldwork, I could attest that this form was used only when the Ground were many entities, such as the legs of a chair, or two houses, as illustrated in Figure 19:

Figure 19. Stimuli affiliated with *-tzalan*



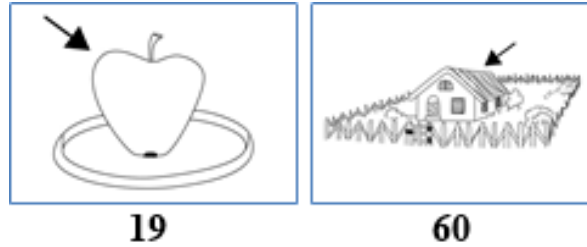
6.2.9 *-tajku*

A cognate of this relational is found in Classical Nahuatl *tlaco* ‘half.’ Campbell (1985: 436) glosses this relational noun as ‘between, among,’ and thus largely synonym with *-tzalan* ‘between, in the middle of.’ It is well-attested in the *Tajtaketzal pal Ijtzalku*:

- (55) *ne siwapil ki-talia-t i-tajku*
 The girl 3SG.O-place-PL 3SG.POSS-middle
 ‘They placed the girl in the middle of it (i.e.: a river)’ (Schultze-Jena & King 2012: 28).

Based on my fieldwork, I consider that this relational noun could be better glossed as ‘in the middle of.’ Despite the glosses in Campbell, *-tzalan* and *-tajku* have very different usages: while *-tzalan* is used when the Ground are many entities, *-tajku* is used when the Ground is only one entity (compare (54)-(55)). This is further illustrated in Figure 20:

Figure 20. Stimuli affiliated with *-tajku*



6.2.10 *ijtik, tik*

These prepositions can be traced back to Proto-Nahuatl **-ihtik* ‘inside’ (Campbell 1985, 224). In Pipil, *ijtik* can be analyzed as consisting of the roots *ijti* ‘stomach’ and the unproductive locative suffix *-k* ‘place of.’ It is important to note that neither *ijtik* nor *tik* can take any possessive prefixes, and so both are better described as prepositions. Campbell (1985: 505) glosses these prepositions as ‘in, from.’ King (2012: 86) considers that, even though *tik* ultimately derives from *ijtik*, their functions are not entirely synonyms anymore. Indeed, during fieldwork, I could attest that *ijtik* was more commonly used in situations where the Figure was completely contained within the Ground, whereas *tik* was especially used in spatial configurations in which the Figure was not completely within the Ground. Both *tik* and *ijtik* are well-attested in the corpus:

(56) *shumet shi-k-mana-kan ne tawial tik se kumit*
 go.PL.IMP 2SG-3SG.O-cook-PL.IMP the corn in one pot
 ‘Go cook the corn in a pot’ (Schultze-Jena & King 2012: 29)

(57) *ashan t-iu t-iawi-t ijtik ne ujt*
 now 2SG-go.AUX 2SG-go-PL in the road
 ‘Now we will go on the road’ (Schultze-Jena & King 2012: 121).

The usage of these two prepositions is illustrated in Figures 21 and 22:

Figure 21. Stimuli affiliated with *tik*

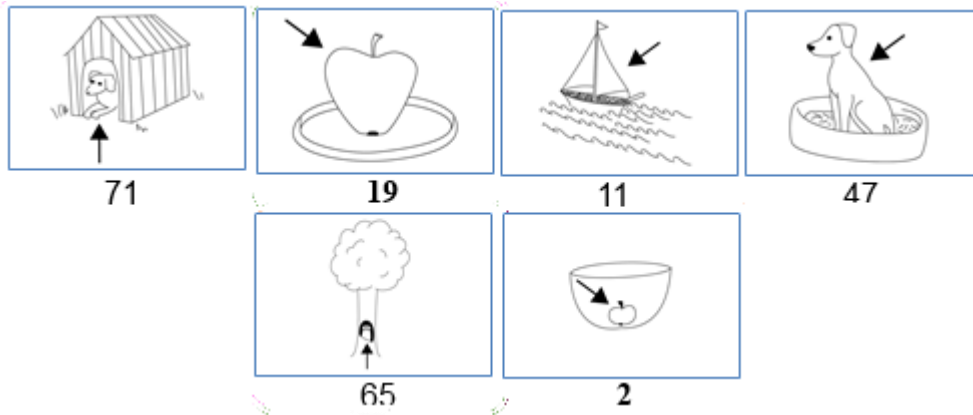
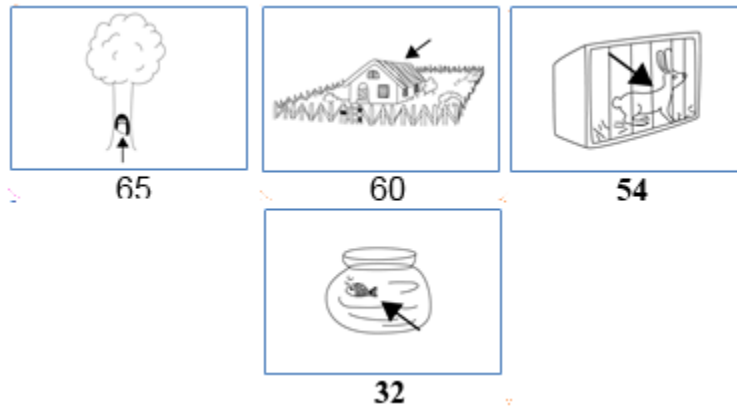


Figure 22. Stimuli affiliated with *ijtik*



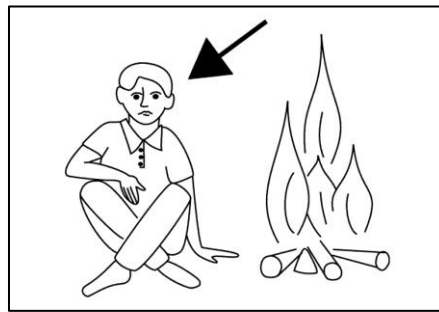
6.2.11 *-nawak*

The locative *-nawak* has been reconstructed for Proto-Nahuatl and is documented in most modern varieties of Nahuatl (Campbell 1985: 360). Andrews (1975: 467) derives it from the nominal root *nawa-* ‘clear, audible sound’ and the locative suffix *-k* ‘place of,’ i.e.: ‘place of an audible sound, proximity, vicinity.’ In Pipil, Campbell (1985: 360) glosses it as meaning ‘near, next to, close to,’ and thus mostly synonym with *-tech*. It is well-attested in the corpus:

- (58) *wan k-ita-k ka asi-k se chulet i-nawak*
 and 3SG.O-see-PAST that arrive-PAST one old man 3SG.POSS-near

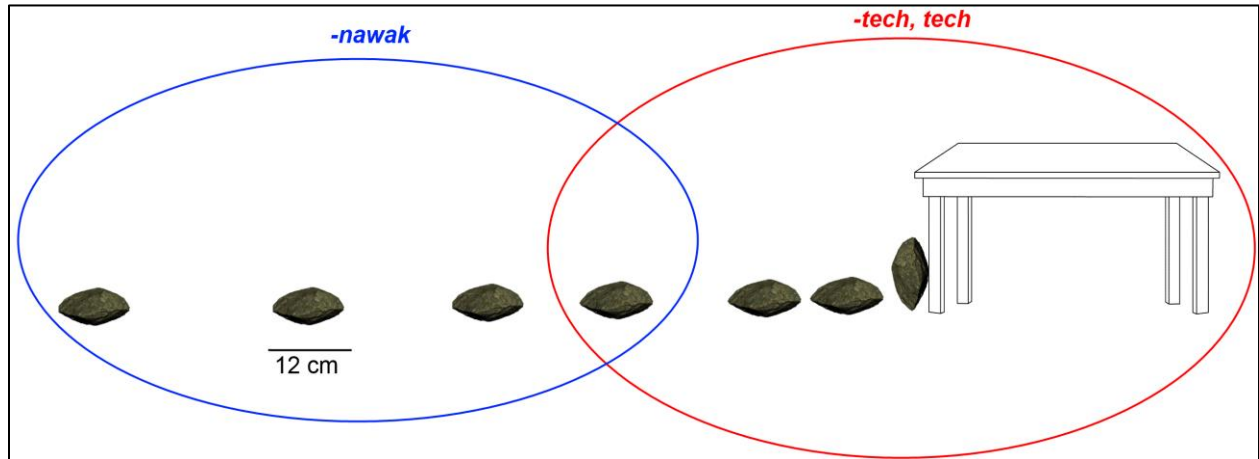
‘And he saw that an old man arrived near him’ (Schultze-Jena & King 2012: 89).

Despite being considered synonyms in Campbell (1985), my consultants, in agreement with what has recently been suggested by King (2014: 10), thought that their meanings were not totally equivalent, as *-tech* entails a sense of closer proximity than *-nawak*. For instance, in BowPed 38, two consultants claimed that it was not adequate to use the locative *-tech* to describe the position of the man by the fire, as he would get hurt for being too close to it. They both agreed that *-nawak* was a more accurate locative in this scenario.



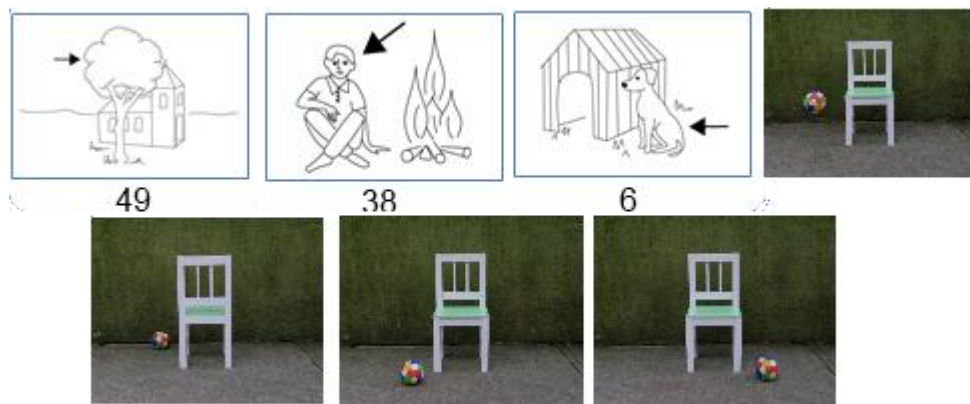
With these two native speakers, and using a real-life stone and a table, I elicited several uses of both locatives describing different spatial arrangements in order to further assess the perceived difference between locatives *-nawak* and *-tech*, summarized in the following Figure:

Figure 23. Semantic classification of *-tech/tech* and *-nawak* in SD Pipil



This relational noun is affiliated with the following spatial configurations:

Figure 24. Stimuli affiliated with *-nawak*



6.2.12 *-nakastan*

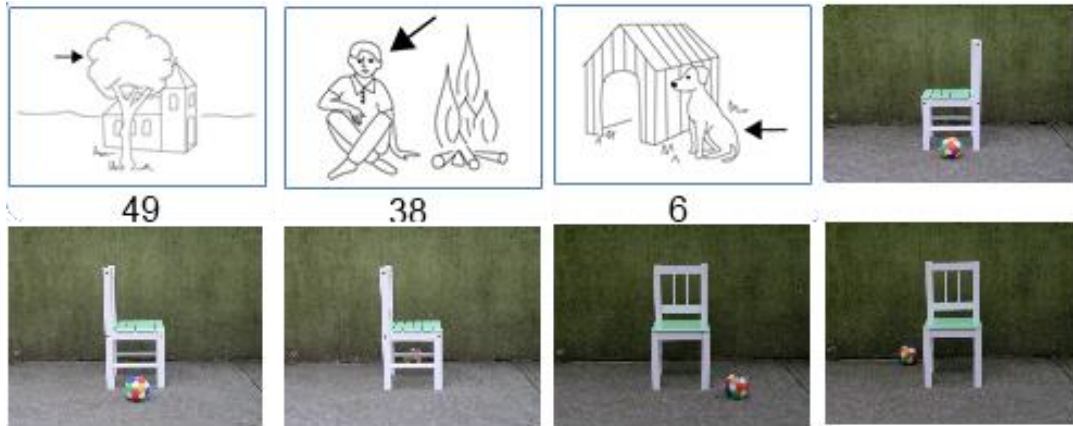
This relational noun consists of the roots *nakas-* ‘ear’ and the unproductive locative suffix *-tan* ‘place of.’ Campbell (1985: 357) defines *-nakastan* as ‘beside, alongside of.’ It occurs only once in the *Tajtaketza pal Ijtzalku*:

- (59) *wan wetz-ki ne tekwani i-nakastan ne itekuyukujtan*
 and fall-PAST the monster 3SG.POSS-beside the lord of the forest

‘And the monster fell beside the lord of the forest’ (Schultze-Jena & King 2012: 93).

Its use is illustrated in the following Figure:

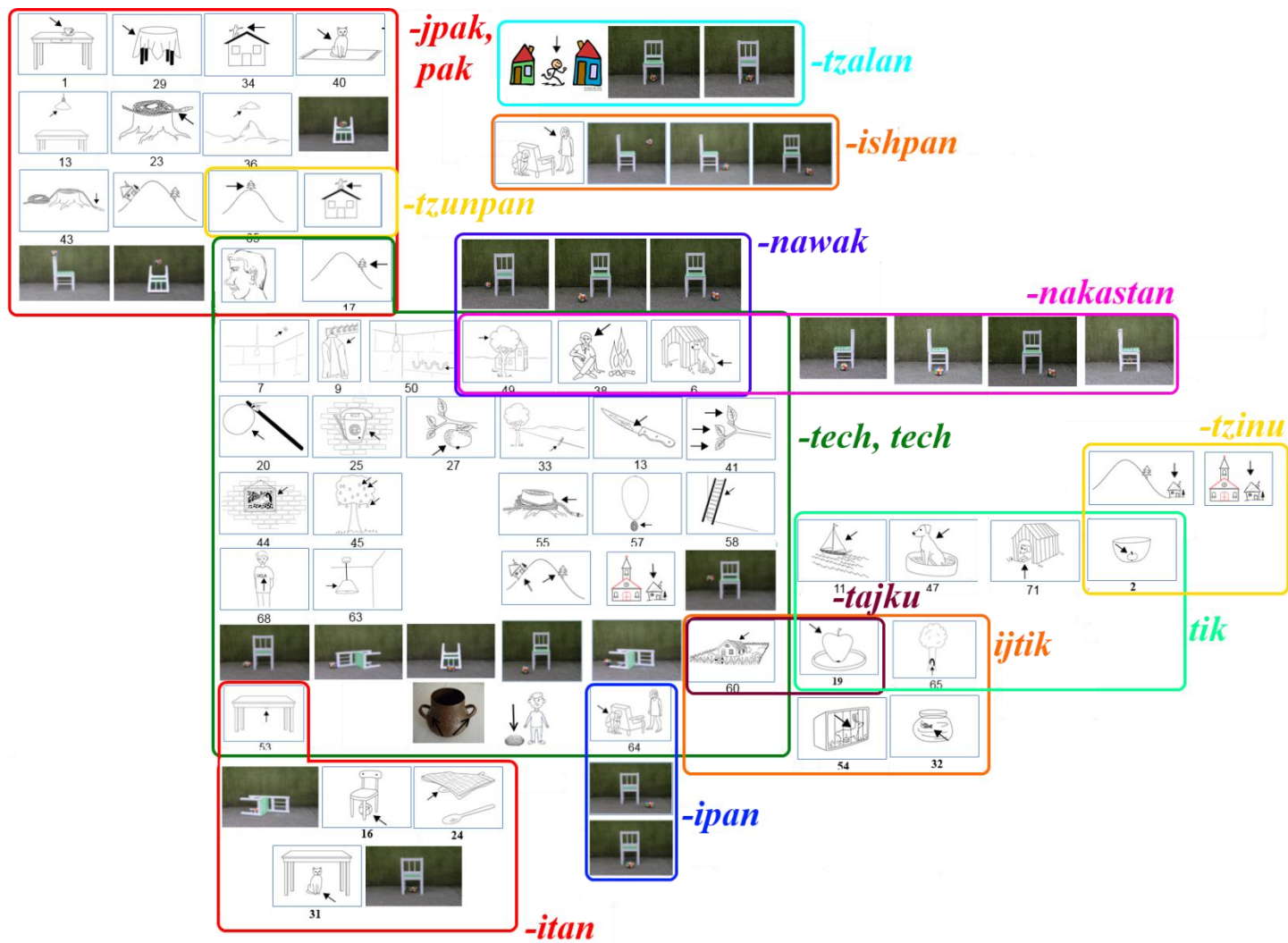
Figure 25. Stimuli affiliated with *-nakastan*



6.3 Semantic Classification of Locatives in SD Pipil

Following is a graphical depiction summarizing the semantic classification of all locatives found in SD Pipil using Venn diagrams. It shows all the visual stimuli and the locative relational nouns they were affiliated with in the elicitation sessions. The fact that speakers would use different relational nouns to describe a single spatial scenario accounts for the overlap between sets.

Figure 26. Semantic classification of locatives in SD Pipil



CHAPTER 7: FRAMES OF REFERENCE IN SD PIPIL

7.1 Introduction

A Frame of Reference (FoR) is the system of coordinates that a language uses to describe the position of a Figure object once it has been removed in space from a relevant Ground or landmark (Levinson & Wilkins 2006: 19). In such situations, since Figure and Ground are separated in space, it becomes necessary to specify some sort of directions or angles relative to the Ground so the Figure can be located. Levinson & Wilkins (2006) argue that the FoRs used by all human languages can be categorized into only three main types: intrinsic, absolute, and relative. These systems are not mutually exclusive and languages can use them in combination, usually restricted for some situations (for example, a language may use an intrinsic FoR when Figure and Ground are relative close but an absolute FoR when distances are larger). The characteristics of the three main types of FoRs, according to Levinson & Wilkins (2006), are as follows:

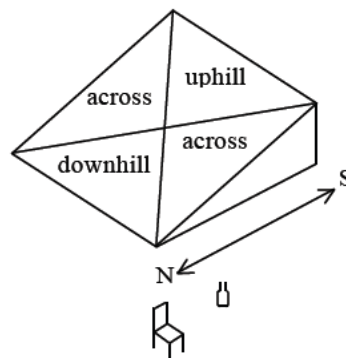
An intrinsic FoR partitions and adheres certain named facets ('front,' 'back,' 'side') to a Ground or landmark and projects search domains from them: 'The bottle is on the side of the chair.' The way these facets are mapped onto objects is complex and language-specific. Indo-European languages such as English or Dutch consider different criteria, such as canonical orientation of the Ground object, its normal direction of motion, and functional orientation (the 'front' of a chair is the side that people usually sit on, the 'front' of a car is the direction in which

it moves). Other languages, such as Tzeltal, use more consistent criteria to assign these named facets into Ground objects, such as the geometrical properties of the Ground, its longest axis, and the shape of its sides. This type of FoR is believed to be common to all human languages (Levinson & Wilkins 2006: 21).

A relative FoR uses the observer's own axes (front, back, left, right) and maps them onto the Ground object: 'The bottle is to the left of the chair' (Levinson & Wilkins 2006: 21).

An absolute FoR uses fixed landmarks that are known by all the speech-community for orientation: 'The bottle is uphill from the chair.' The absolute coordinates that languages can deploy come from a variety of sources: solar compass, sidereal motion wind directions, or mountain slopes. As illustration, Tenejapan Tzeltal (Mayan) exhibits an absolute FoR based on a mountain slope, as Illustrated in Figure 27:

Figure 27. Absolute FoR in Tenejapan Tzeltal



7.2 FoRs in the MesoSpace Project

The three-way FoR typology proposed by Levinson & Wilkins (2006) was later revised by the MesoSpace documentation project, a recent initiative aimed at documenting spatial language in under-documented Mesoamerican languages (O'Meara & Pérez 2011) (see Table 8).

Table 8. Languages studied in the MesoSpace project (O’Meara & Pérez 2011)

Language	Language family
Tarascan	Isolate
Tzeltal	Mayan
Yucatec	Mayan
Mopan	Mayan
Ayutla Mixe	Mixe-Zoquean
San Ildefonso Tultepec Otomí	Otomanguean
Juchitán Zapotec	Otomanguean
Meseño Cora	Uto-Aztecan
Seri	Isolate
Sumu-Mayangna	Misumalpan

This group of researchers refined and proposed 6 possible categories for FoRs in human languages: object-centered, direct, relative, absolute, landmark-based, and geomorphic FoRs. As SD Pipil belongs to the Mesoamerican *sprachbund*, I will compare my results against these categories, and each one of them is illustrated in the following pages.

Researchers in MesoSpace introduced the concept of ‘Anchor,’ absent in Levinson & Wilkins (2006). An ‘Anchor’ has been defined as “an entity or event that introduces a spatial asymmetry from which the axes of the coordinate system or FoR are transposed (projected) or abstracted” (O’Meara & Pérez 2011: 839). In an object-centered FoR, for example, the Anchor and the Ground are the same entity, while being distinct from the observer’s body. An object-centered FoR uses a coordinate system that is determined from the parts of the Ground. Consider, for example, Figure 28, in which the ball is the Figure and the chair is the Ground:

Figure 28. Ball and Chair 1



In an object-centered FoR, the coordinate system will be determined by the front-back axis of the chair and the ball will be located relatively to the region projected from the ‘front’ part of the chair. Thus, a statement such as (60) is fundamentally true in an object-centered FoR:

(60) The ball is in front of the chair

However, once the spatial configuration is rotated, as shown in Figure 29, the statement in (60) is no longer valid in an object-centered FoR:

Figure 29. Ball and Chair 2



In a direct FoR, the body of the observer serves as the Anchor and Ground, although the axes of the observer are not mapped onto the Ground (as occurs in the relative FoR). Thus, the situation depicted in Figure 28, can be described by a statement of the form “The ball is in front of us.”

In the relative FoR, Anchor and Ground are different: the Anchor is the observer’s body and its axes (left-right), which are projected onto the Ground. In a relative FoR, the situation in Figure 28 would be described by the statement “The ball is to the right of the chair.”

In the absolute FoR, the Anchor is some entity other than the Ground and the observer’s body: it is derived from the solar compass. In an absolute FoR, Figure 28 could be described as “The ball is north of the chair.”

In the landmark-based FoR, the Anchor is some entity in the local environment known by the speech community: “The ball is toward the church from the chair.”

In the geomorphic FoR, the Anchor is some local environment landmark such as a river or incline: “The ball is upstream from the chair.”

7.3 Frames of Reference in SD Pipil²¹

Unlike Indo-European languages such as Spanish, English, and Dutch, it has been reported that Mesoamerican languages “show a bias against the use of the relative FoR” (O’Meara & Pérez 2011: 838). During my fieldwork, I could attest that this holds true for SD Pipil: although Campbell (1985: 598) documents a relational noun *-yejkan*, glossed as ‘to the right of,’ none of the consulted native speakers was familiar with it. Moreover, notions like

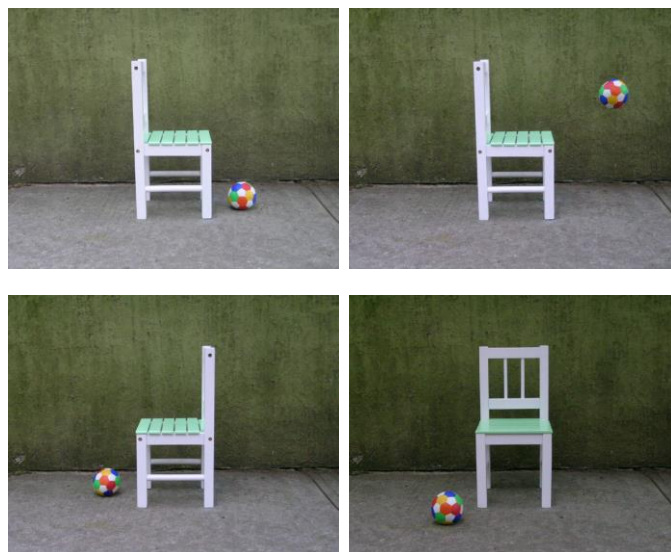
²¹Recall that the stimuli used for this component of my research was the *Ball and Chair* picture series (Bohnenmeyer 2008)

‘right’ or ‘left’ were totally absent in all spatial descriptions (including stimuli aimed at eliciting topological relations).

Instead, SD Pipil makes *exclusive* use of the object-centered FoR. I couldn’t attest any instances of other FoR systems during my fieldwork, such as absolute or landmark-based. As in the prototypical object-centered FoR discussed above, SD Pipil speakers assigned named facets ‘front, back, side’ to the Ground (the chair in the ‘Ball and Chair’ picture series), and consistently described the position of the ball relative to the chair according to these facets. Thus, as can be seen in Figure 28, even when the spatial configuration of the ball and chair is rotated, all these scenarios were described by the same statement:

- (61) *ne pelotaj nemi ishpan ne siyaj*
 the ball LOC in front of the chair
 ‘The ball is in front of the chair’

Figure 30. Stimuli affiliated with *-ishpan*



On the other hand, when the ball was located along the back axis of the chair, as in Figure 29, despite how Figure and Ground were rotated, all situations were described by:

- (62) *ne pelotaj nemi ipan ne siyaj*
 the ball LOC behind the chair
 ‘The ball is behind the chair’

Figure 31. Stimuli affiliated with *-ipan*



When the ball was located outside the front/back axis of the chair, as illustrated in Figure 32, at least three speakers would rely on the locative *-nakastan* ‘beside’ and one would systematically use *-nawak* ‘near.’

- (63) *ne pelotaj nemi i-nakastan ne siyaj*
 the ball LOC 3SG.POSS-beside the chair
 ‘The ball is beside the chair’

Figure 32. Stimuli affiliated with *-nakastan* or *-nawak*



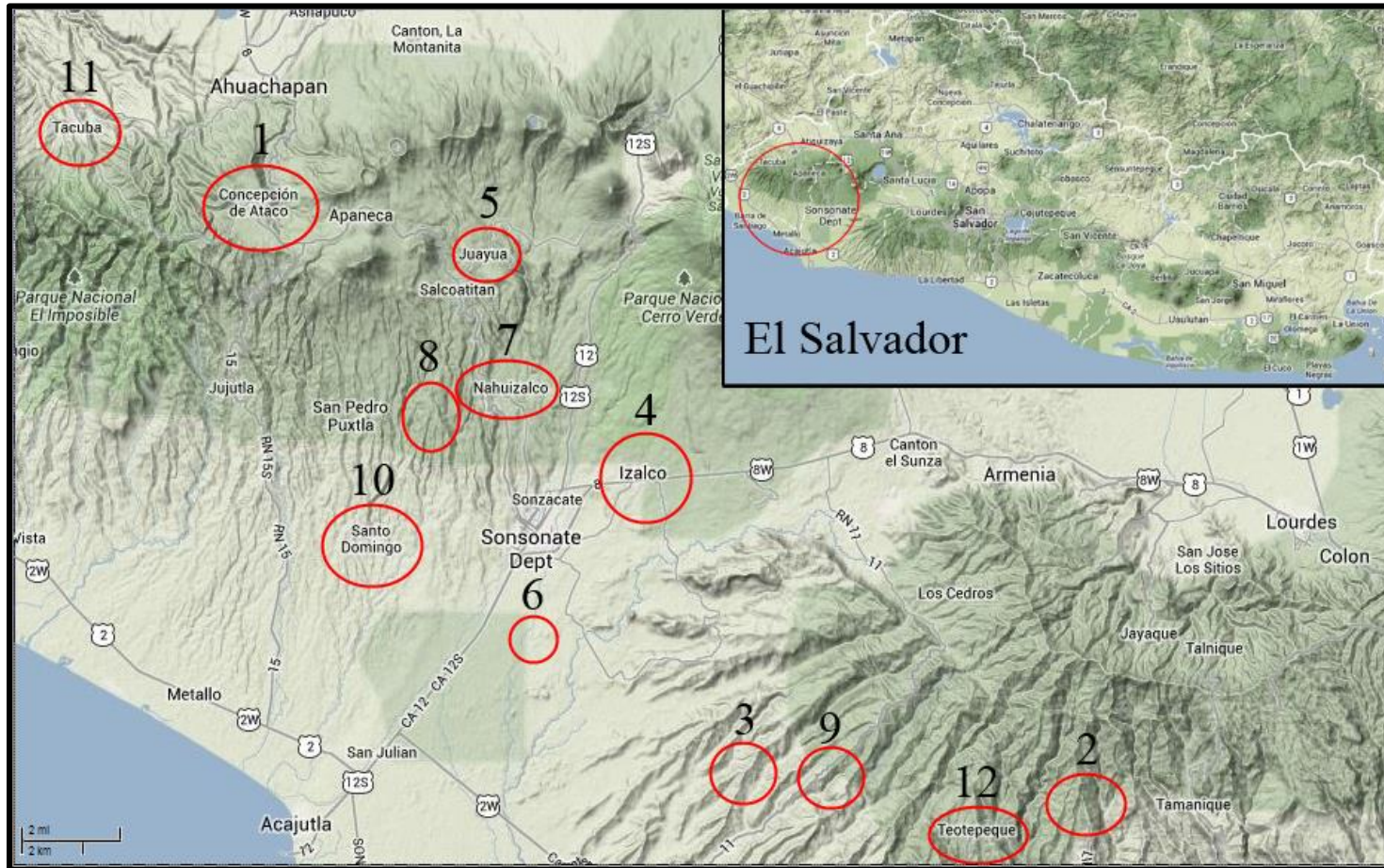
CHAPTER 8: CONCLUSIONS

As a general conclusion, I found that static spatial description in SD Pipil fits well within the space semantics typologies proposed by Levinson & Wilkins (2006), Ameka & Levinson (2007), and the MesoSpace project (O'Meara & Pérez 2011). First, in line with the Basic Locative Construction hierarchy proposed by Levinson & Wilkins (2006), SD Pipil speakers would consistently use the BLC to describe a certain group of spatial configurations (those that include the Core and Adhesion scenes) and use alternate constructions, such as resultative constructions, for those in higher positions in the hierarchy. Second, SD Pipil is a Type Ib language in the Ameka & Levinson Basic Locative Construction typology; namely, it uses a single locative verb *nemi* 'to be, to exist' to express location. As it features a developed system of locative adpositions, SD Pipil does not rely on positional verbs to describe spatial location. The use of only one locative verb in locative predicates is interesting from an historical point of view, as I showed evidence, for the first time, that spatial predication in other Nahua languages, including Classical Nahuatl, belongs to Type II (small sets of contrasting posture verbs). The influence of Spanish on spatial description in SD Pipil is evident. For instance, it has motivated the still ongoing development of prepositions from original relational nouns; moreover, even the structure of the BLC in SD Pipil closely mirrors its Spanish equivalent, not only in the order of the elements, but in the form requirements for the positional verbs, which must always be in the participle.

Third, SD Pipil features less relational nouns than other varieties of Nahuatl, such as Classical Nahuatl, and their morphology has been simplified. SD Pipil is a great and, to my knowledge, unique example of a language with a system of absolute locatives (locatives that only convey information about the axial relationship between Figure and Ground, disregarding any situation of contact between them): it could be said that SD Pipil locatives convey absolute spatial relationships between Figure and Ground not only in the vertical axis, but also in the *horizontal* axis. Locatives *-tech* ‘on, near’ and *-nawak* ‘near’ which have been traditionally glossed as synonyms, seem to have subtle differences in meaning: *-tech* entails a sense of closer proximity than *-nawak*. Fourth, SD Pipil, like most languages of Mesoamerica, does not use a relative Frame of Reference (FoR); rather, it features exclusively an object-centered (FoR), as described in the MesoSpace project (O’Meara & Pérez 2011); that is, SD Pipil speakers assign named facets ‘front, back, side’ to a Ground and consistently described the position of a Figure relative to the Ground according to these facets. I couldn’t find evidence that language obsolescence rather than language contact could be accounted for the changes found in SD Pipil.

As the first detailed account of the static subdomain of space in a Nahua language, this study hopes to spur interest in applying similar approaches to other related languages and contribute to the growing literature on Pipil and its dialects. Finally, and perhaps most importantly, this study demonstrates once again the need for more fieldwork on under-documented and endangered languages, as well as in language revitalization: a language spoken by less than 200 mostly elderly people in El Salvador has been shown to offer the most valuable contributions to linguistic sciences in general.

APPENDIX 1. PIPIL-SPEAKING LOCALITIES IN THE 70'S. Source: Campbell (1985). Image: Google Maps



- | | | |
|----------------------|-----------------------------------|------------------------------------|
| 1) Ataco | 5) Juayúa | 9) Santa Isabel Ishuatán |
| 2) Chiltiupán | 6) Nahuilingo | 10) Santo Domingo de Guzmán |
| 3) Cuisnáhuat | 7) Nahuizalco | 11) Tacuba |
| 4) Izalco | 8) Santa Catarina Mazáguat | 12) Teotepeque |

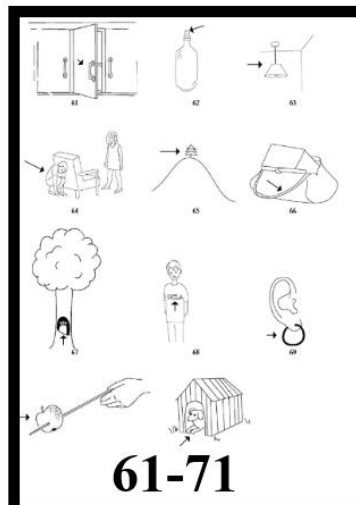
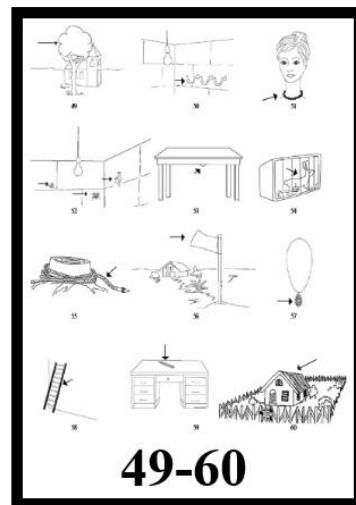
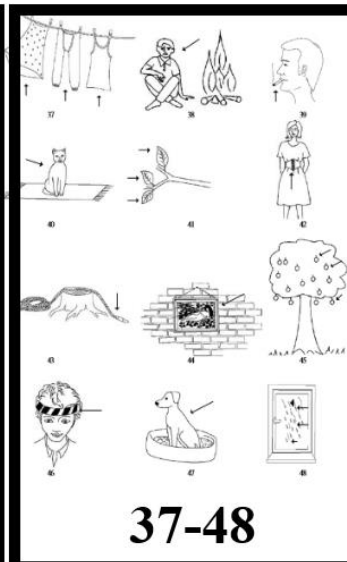
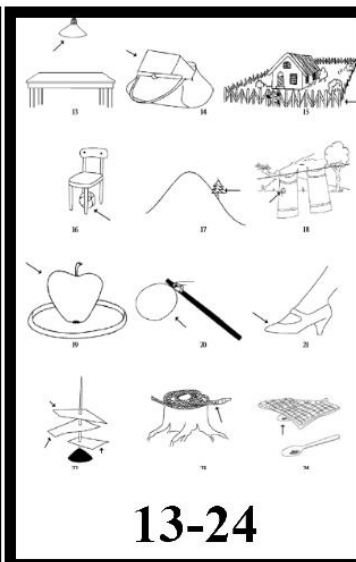
APPENDIX 2. NAHUA LANGUAGES AND DIALECTS.

Source: Lastra de Suárez (1986) ²²



²² Areas in grey represent extinct Nahua varieties.

APPENDIX 3. "BOWPED" TOPOLOGICAL RELATIONS PICTURE SERIES. Source: (Bowerman & Pederson 1992)

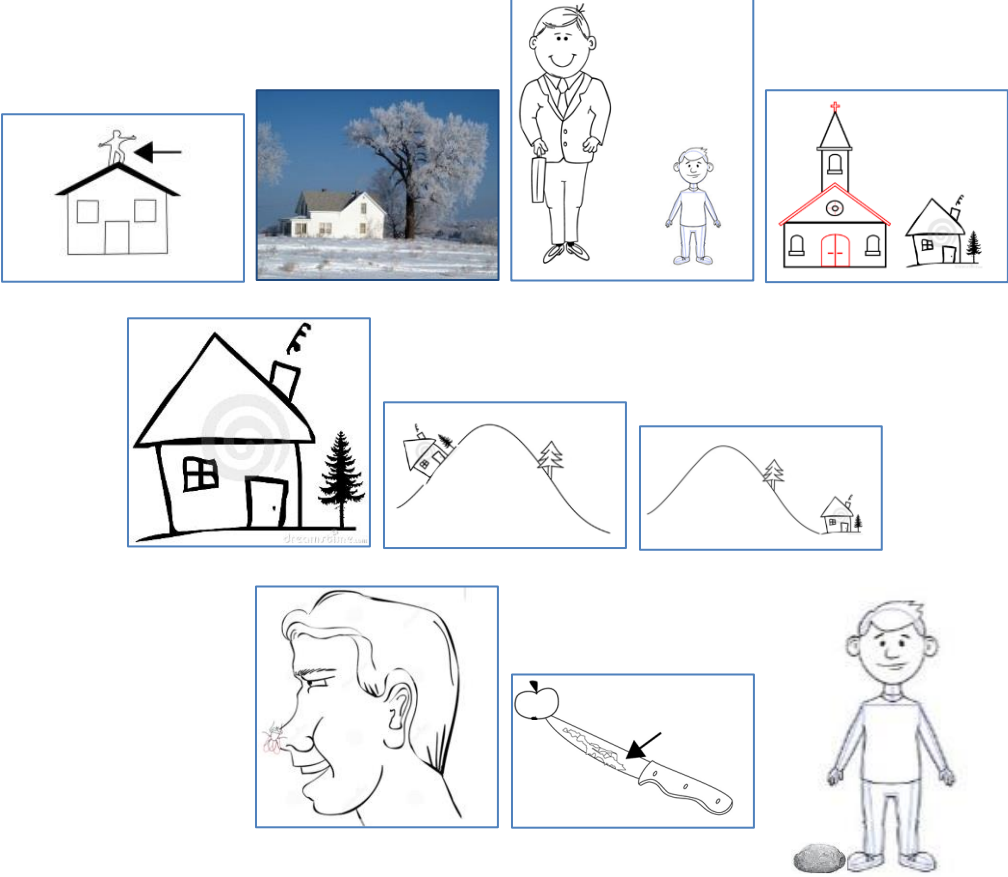


APPENDIX 4. BALL AND CHAIR PICTURE SERIES.

Source: Bohnemeyer (2008)



APPENDIX 5. MISCELLANEOUS STIMULI



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