

# A case study on early acquisition of verbs in Yucatec Maya

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## 0. Introduction

The purpose of this study is to show the early development of verb morphology and the building of paradigms in one Yucatecan child, Sandi.

## 1. Verb classification in Yucatec

Yucatec Maya is a head-marking language: the verbal complex can function on its own as a complete sentential proposition (Lucy 1994:627). It is characterized by the reduction of the morphological segmentability which is the result of morphophonemic and phonotactic adaptations (Bohnenmeyer 1998).

Our study distinguishes between intransitive and transitive verbs. In the verb complex, person, mood and aspect are represented by inflectional patterning. The distinction between transitive and intransitive verb roots is based on their very different inflectional suffixes.

"Intransitive verbs are inflected by cross-reference marking for their S-arguments, transitive verbs are inflected by cross-reference marking for their A-arguments and their O-arguments. Intransitive verbs are further distinguished on grounds of other inflectional properties into active, inactive, inchoative and positional intransitives." (Bohnenmeyer 1998:155).

Personal markers are expressed through "set B" and "set A"

Person	Set-B suffixes (absolutive)		Set-A clitics (ergative)	
	Singular	Plural	Singular	Plural
1 <sup>st</sup>	-en	-o'on	IN(w)	iN(w) ...-o'on
2 <sup>nd</sup>	-ech	-e'ex	A(w)	a (w) ...-e'ex
3 <sup>rd</sup>	-Ø /-ih	-o'ob	U(y)/y	u(y)/y ...-o'ob

Table 1: Personal markers

The subject person is marked by clitics attached to the auxiliaries, but in some cases to the verbal stem. The object person is marked by a suffix, optionally followed by a subject plural marker. There are no morphological case markers.

The aspect and mood markers found in the analyzed corpus are set out in the following table in bold letters:

Status category Verb class		Imperfective	Perfective	Subjunctive	Resultative
Intransitive	Active	-Ø	-nah	-nak	-(-nah)a'an
	Inactive	-Vl	-Ø	-Vk	-a'an
	Positional	-tal	-lah	-l(ah)ak	-Vkbal /-(lah)-a'an
	Inchoative	-tal	-chah	-chahak	-a'an
Transitive	Active voice	-ik	-ah	-Ø / -eh	-a'an -mah

Table 2: partial description of Yucatec status inflection according to verb classes (Bohnmeyer 1998:221,224)

Examples of paradigms in Yucatec Maya:

a) Intransitive inactive verb:

táan u wen-el	'he is sleeping'
h ween-Ø-ih	'he slept'
ka'ah ween-ek	'he might sleep'
Imperative form: ween-en	'sleep'

b) Intransitive active verb:

táan u ts'aak	'he is curing'
(h) ts'aak-nah-ih	'he cured'
ka'ah u ts'aak-nak	'he might cure'
Imperative form: ts'aak-nen	'cure'

c) Intransitive positional verb:

Táan u ch'uy-tal	'it is hanging'
Ch'uy-lah-ih	'it hung'
Ka'ah ch'uy-lak	'it might hang'

c) Transitive verb:

táan in kan-ik	'I am learning it'
t in kan-ah	'I learned it'
ka'ah in kan-eh	'I might learn it'
Imperative form: kan-eh	'learn it'

Among the auxiliaries which are related to several aspects of transitive verbs (see table 2) the following are found in Sandi's data: progressive *táan*, the obligative *yan* and the habitual *k-*. These auxiliaries generally require the imperfective aspect marked by the suffix *-ik*, which is compatible with a variety of auxiliaries, while the perfective aspect is marked by the suffix *-ah*, and only allows the auxiliary *t-*. Although both aspect endings are found in the data, the use of the auxiliary *t-* does not appear in Sandi's case. Furthermore the auxiliary *sam* 'rather', which requires the subjunctive mood *-eh*, is the first auxiliary used by Sandi. Where no aspect morpheme appears the verb receives a subjunctive reading.

In Yucatec every intransitive verb can be derived from a transitive verb and every transitive verb can be derived from an intransitive verb. Each valency alternation is explicitly marked. In the

present data no derivation from the transitive to the intransitive<sup>1</sup> is found, but two derivational patterns from intransitive to transitive are registered, expressed by two different suffixes for argument extension: the suffix *-s* which encodes the introduction of a causer, and the suffix *-t* which encodes the introduction of an affected object.

The most frequent suffixes in our data are the following:

TRANSITIVE VERBS		INTRANSITIVE VERBS	
<i>-eh</i>	subjunctive/imperative mood	<i>-Vk</i>	subjunctive mood
<i>-ik</i>	imperfective aspect	<i>-Vl</i>	imperfective aspect
<i>-ah</i>	perfective aspect	<i>-Ø-ih</i>	perfective aspect, 3sg.
<i>-a'an</i> resultative aspect			

Table 3: aspect, mood and personal suffixes of Sandi's corpus

## 2. Data description

The data analyzed in the present study represents the age range of 1;9.27 to 2;2.27, covering 12 recordings (table 4) as part of a longitudinal study. Over three years (1995-1998) Sandi's spontaneous speech data was recorded. Sandi's family was selected from her home Maya peasant community of Yalcobá in the eastern part of the state of Yucatán, about 150 km from Mérida, the capital of the state. The selection criteria were: first born child; monolingual family.

Number of recordings	Age	Time of recordings (in minutes)	Number of analyzable utterances
1	1;9.27	60	67
2	1;9.29	60	96
3	1;10.17	60	46
4	1;10.24	60	134
5	1;11.9	45	257
6	1;11.14	45	375
7	2;0.6	45	149
8	2;0.27	45	70
9	2;1.3	45	179
10	2;1.26	45	75
11	2;2.2	45	158
12	2;2.27	45	135

Table 4: Sandi's corpus used for the analysis of her verb development

Table 5 shows the quantitative development of verb usage by Sandi. There is a constant increase of verb utterances in the whole corpus, and a highlighted increase in all areas starting at age 2;1.

<sup>1</sup> There are systematic ways of derivation from transitive to intransitive that lead to either inherently imperfective or inherently perfective verbs. A transitive verb becomes intransitive by the use of passive or middle voice; both operations result in the removal or demotion of the subject. The passive voice is marked by a glottal-stop insertion together with vowel lengthening, whereas the middle voice is marked by vowel lengthening combined with a high tone (Kraemer 1999:445).

Age	Analyzable Utterances	Utterances with verbs	Verb lemmas/new lemmas	Types/*errors	Tokens	Tokens %
1;9	163	52	19	19/*3	64	39,2%
1;10	180	93	22/10	25/*4	93	51,7%
1;11	632	130	35/28	42/*9	125	19,8%
2;0	219	104	35/15	43/*3	113	51,6%
<b>2;1</b>	<b>254</b>	<b>155</b>	<b>44/11</b>	<b>60/*5</b>	<b>177</b>	<b>69,7%</b>
2;2	293	171	47/18	69/*4	153	52,2%
Total	1741	705	202/82	258/*28	725	41,6%

Table 5: total number of analyzable utterances, verb lemmas, types(/\*errors) and tokens; percentage of tokens in relation to the total number of child utterances per month

### 3. Development of verb categories

Table 6 shows the overall development of Sandi's verb categories. The data from this table will be referred to throughout the remainder of this paper.

Verb endings (Grammatical Categories)	1;9	1;10	1;11	2;0	2;1	2;2
- <i>ch</i> (TR: subj./imp.) (*INTR: imp.)	10/27 (*3/4)	11/61 (*3/13)	19/79 (*3/7)	18/59 (*2/3)	17/106 (*1/1)	21/87 (*2/2)
- $\emptyset$ (INTR: impf; TR: subj.; imp. + obj.)	7/21	6/14	11/26	13/28	22/40	18/18
- <i>VI</i> (INTR: impf.)	-	1/2	3/8	3/9	7/11	6/7
- <i>tal</i> (INTR: impf.)	1/5	1/2	0/0	2/7	1/1	1/1
- $\emptyset$ - <i>ih</i> (INTR: pfv.3sg.)	1/11	4/11	5/8	3/4	2/3	4/7
- <i>ik</i> (TR: impf.)	-	-	1/1	2/2	6/6	8/19
- <i>Vk</i> (INTR: subj.)	-	-	-	1/3	2/7	2/2
- <i>mah</i> (TR: result.)	-	-	1/1	1/1	1/1	-
- <i>a'an</i> (INTR/TR: result.)	-	-	1/1	-	-	3/3
- <i>en</i> (INTR: imp.)	-	-	-	-	1/1	1/1
- <i>ah</i> (TR: pfv.)	-	-	-	-	1/1	3/4
- <i>o'ob</i> (3pl.)	-	-	1/1	-	-	2/4

Table 6: Sandi's verb categories (types/tokens) including correct and incorrect (\*) forms

#### 3.1. First verb forms in the premorphological phase

According to the acquisition model of pre- and protomorphology (Dressler 1994), we determine age 1;10 as the end of the premorphological phase. At age 1;9 and 1;10, according to table 6, Sandi's verb forms are dominated by the suffix *-ch* (21/88), and by bare roots [ $\emptyset$ ] (13/35). Both forms are used as imperatives but some of the unmarked root/stem forms also occur with desiderative illocutions. Some of the unmarked forms at times may be hard to distinguish from the use of verb roots as nouns. In Mayan languages, many roots appear both as nouns and as verb stems. In our data this is the case with *chu'uch* 'suckle/breast' and *chi'* 'bite/mouth'. These lemmas occur only in root form.

Among the aspect suffixes, according to table 6, the perfective aspect is present with the following intransitive verbs *bin* 'go', *lúub-* 'fall', *máan* 'pass by' and *xup* 'use up', but only with the third person singular ending *-ih*: *bin- $\emptyset$ -ih* ('he/she/it has gone').

Two types of formal errors are found in the premorphological phase:

- a) the use of the ending *-eh*: This suffix corresponds to the subjunctive/ imperative mood of transitive verbs, but Sandi also uses this suffix in intransitive verbs. This error shows a categorical underspecification which is characteristic for the premorphological phase. Here are some examples of Sandi's use: [*\*éem-eh*] instead of *éem-en* 'let (me) down'; [*\*ok-eh*] = *ok-en* 'enter'; [*\*koteh*] = *koten* 'come'; [*\*wa'al-eh*] = *wa'al-en* 'stand up'. The same error appears with the following morphological combinations: [*táat-eh*] = *ts'ah-ten* (= *ts'ah ti' teen*) 'give it to me'; [*meek'-eh*] = *meek'-eh teen* = *meek'-en* 'hug me'.
- b) The positional intransitive verb *kul-* 'sit down' is used by Sandi with the imperfective aspect -*tal:kul-tal* but with the imperative meaning.

The first lemmas which appear in more than one form during the period of 1;9 and 1;10 are the following:

LEMMA	TRANSITIVE VERB	LEMMA	INTRANSITIVE VERB
<i>mach</i> 'grasp'	<i>*mach</i> (root: imp.) <i>mach-eh</i> (imp.)	<i>ok</i> 'enter'	<i>*ok</i> (root: imp.) <i>*ok-eh</i> (imp.)
<i>wach</i> 'open'	<i>*wach</i> ' (root: imp.) <i>wach'-eh</i> (imp.)	<i>wa'al</i> 'stand up'	<i>*wa'al</i> (root: imp.) <i>*wa'al-eh</i> (imp.)
		<i>méek'</i> 'hug'	<i>*méek'-eh</i> 'hug me' <i>*méek'-ech</i> 'hug me'

Table 7: precursors of mini-paradigms in the premorphological phase

The root and the ending *-eh* are the first forms to emerge as demonstrated in table 7. The alternative use of roots and the ending *-eh*, particularly of the transitive verbs, could be taken as an indicator of the beginning of paradigm formation, although both forms are used by Sandi solely with an imperative meaning. We can therefore conclude that these forms represent the precursors of mini-paradigms.

In the data of Sandi's age 1;10.24 one intransitive verb appears not only with the ending *\*-eh*, but also with the perfective aspect. This is: *ok* 'enter'; *ok\*-eh* (imp.); *ok-Ø-ih* (3sg. pfv.).

One of the first morphological combinations in Sandi's production is the form *\*méek'ech* 'hug you' which she uses for *méek'-en* 'hug me' (Pfeiler y Martín Briceño 1997: 120) imitating the form of one of the most frequent utterances of Sandi's parents, consisting of *meek'*-subj.+2sg.pron. (*méek'-eh-teech*) as in the following example:

Mother    *Koten in méek'-ech.*  
               *come:imp. 1sg.erg hug:2sg.abs.*  
               *Come, so that I can hug you.*

Comparing now the productive use of suffixes to the use of prefixes, including especially the person marking affixes cross referencing core arguments, neither these markers nor auxiliaries are present at age 1;9 and 1;10.

In conclusion, we can state that during the premorphological phase of verb development in Sandi's speech, the unmarked and unprototypical characteristics of the verb/noun roots in Yucatec Maya as well as the isolated and less marked characteristics of the imperative mood are both present in this phase, confirming the predictions of Natural Morphology.

### 3.2. Transition phase from pre- to protomorphology

According to table 6, at age 1;11 and 2;0 the morphological activity in Sandi's speech is increasing and new categories such as the imperfective aspect for transitive (*-ik*) and for

intransitive verbs (-*VI*) as well as the resultative aspect for transitive verbs (-*mah*) and for both verb classes (-*a'an*), are arising. Other new verb morphological combinations are: *ts'a-ti* 'give it to him/her' (substituting the previous incorrect form of the 2<sup>nd</sup> person singular *\*ts'ateh*). Also the hortative form of the irregular verb *bin* 'go' (*ko'ox* 'let's go') which is followed by the verb 'play' in this case is new. The verb ending *-eh* and bare roots still dominate as well as the incorrect use of the imperative mood in intransitive verbs such as: *\*kul-eh* 'sit down', or *\*ok-eh* 'enter'.

A new kind of error appears at this age, an analogical form of *\*méek'-ech* 'hug me'. Now Sandi uses *\*éem-ech* 'let me down' in alternation with *\*éem-eh* instead of *éem-en*.

At age 1;11 seven new two-member paradigms are found which are the following:

LEMMA	TRANSITIVE VERB	LEMMA	INTRANSITIVE VERB
k'aat 'ask, request'	k'áat-eh (imp.) k'áat-i' (k'áat+ti'+leti')	éem 'descend'	*éem-eh (imp.) *éem-ech (imp.)
p'o' 'wash'	p'o' (impf.) p'o'-eh (imp.)	kul 'sit down'	kul-tal (impf.) *kul-eh (imp.)
k'al 'close'	k'al-eh (imp.) k'al-a'an (result.)	máan 'pass by'	máan (impf.) *máan-eh (imp.)
		bin 'go'	bin-ih (3sg.pfv.) ko'ox (hort.)

Table 8: two-member-paradigms at age 1;11

Table 8 shows that the most frequent verb-forms used in the formation of Sandi's paradigms correspond to the same category which emerged early, namely the imperative, expressed by the root form and the ending *-eh*.

### 3.2.1. Emergence of three-member paradigms

The first three-member paradigm is found in the data of age 2;0.6 with the suppletive verb *bin* 'go':

(tan) *bin* ((prog.) root)  
*bin-ih* (3sg.pfv.)  
*ko'ox* (hort.)

However, it seems that due to the irregularity of the intransitive verb '*bin*' all the three forms are memorized.

At age 2;0.27 one three member-paradigm is made up, but this time from transparent types of forms. This is the case with the already known transitive verb *mach* 'grasp':

LEMMA	TRANSITIVE VERB
mach 'grasp'	mach~mach-eh (imp.) mach-ik (impf.) mach-mah (result.)

Table 9: first three-member paradigm

Around the same age two new two-member paradigms are found: one of them is formed with the imperfective aspect of a transitive verb and the other with the resultative aspect of an intransitive verb:

LEMMA	TR. VERB	LEMMA	INTR. VERB
Haant 'eat it'	Hant-eh (imp.) Han-t-ik (impf.)	lúub- 'fall'	lúub-ich (3sg.pfv.) lúub-a'an (result.)

Table 10: new two-member paradigms at age 2;0

Bare roots still appear with the imperative and/or desiderative meaning but without the corresponding auxiliary. Furthermore the data until 2;00 lacks any personal affixes and auxiliaries.

With respect to the perfective aspects, the ending *-ih* of the third person singular of intransitive verbs still dominates but also incorrectly appears with a new transitive verb, which is *k'it* 'spill'. Could we interpret this as an overgeneralization or as the emergence of the antipassive form?

### 3.3. Verb categories in protomorphology

According to table 6 at age 2;1 almost all verb-forms have increased in frequency, especially the use of the imperfective aspect of transitive and intransitive verbs. Seven two-member paradigms are registered, two of them with new lemmas, which are *cha'* 'untie' (root, *-eh*) and *oks-* 'insert' (root, *-eh*). The other paradigms are formed with already acquired lemmas but with new categories, such as the imperfective aspect (*-ul*) and the subjunctive mood (*-uk*) of the intransitive verb *lúub-* 'fall'. Two three-member paradigms are found, one formed of the well-known verb *mach* 'grasp' and the other of *méek'* 'hug' with the following forms: *\*méek'-ech* 'hug me', *méek'-eh* 'hug her/him/it' and the root form *\*méek'-*, all of which are used incorrectly with an imperative or desiderative meaning. Only at age 2;1 Sandi uses for the first time the perfective suffix *-ah* (*pul* 'throw') in a transitive verb with the corresponding meaning (*kach-ah* 'splitted'). At the same time the auxiliary *sam* 'rather' (requiring the subjunctive mood) appears with the intransitive verbs *lúub-uk* (fall), and *wen-ek* (sleep), and as well as the auxiliary *k-* appears with the imperfective aspect *-ik*. Even the first person clitics appear which are the first and third persons singular: *in*, and *u*. During the period of 2;1 to 2;2 the number of bare roots is reduced by 14,6% (in relation to the total number of verb tokens). Table 7 shows that the most frequent *-Ø* form which corresponds to the subjunctive mood of transitive verbs, is used by Sandi in almost all cases with an imperative meaning. From age 2;1 on, the use of bare roots of transitive verbs with a subjunctive mood decreases in frequency and at the same time the use of transitive roots followed by an object becomes increasingly more frequent. The decreasing use of transitive bare roots with the subjunctive ending and the increasing use of transitive roots followed by an object indicate that the child is becoming aware of the correct usage of the imperative mood in transitive verbs.

Verb ending (gramm. categories)	1;9	1;10	1;11	2;0	2;1	2;2
-Ø (TR. subj.)	6/20	5/13	7/17	8/10	11/20	8/9
-Ø (TR. imp. + Obj.)	-	-	2/8	½	8/11	6/6
-Ø (INTR. impf.)	1/1	1/1	2/2	4/16	3/9	3/3

Table 7: grammatical categories of the unmarked verb form (-Ø)

With respect to the imperative mood of transitive verbs followed by a noun the number of correct combinations increases constantly. This constant increase is also found in the correct use of the imperfective aspect of transitive verbs *-ik* and of intransitive verbs (*-VI*).

At age 2;2 nine lemmas are found in two-member paradigms of transitive verbs (these are: *báaxt-* 'play it', *hant-* 'eat it', *méek'* 'hug', *oks-* 'insert', *pul* 'throw', *púust-* 'wipe', *taas* 'bring', *ts'a* 'give', *wach'* 'untie') as well as four lemmas of intransitive verbs (*bin* 'go', *lúub-* 'fall', *k'al* 'cover' and *kul-* 'sit down' and one new intransitive, inchoative verb (*lu'unt-* 'become earth') used incorrectly with the ending *-eh* are found in the two-member paradigms.

The three-member paradigms are the following:

LEMMA	TRANSITIVE VERB	LEMMA	INTRANSITIVE VERB
il 'see'	il-ik (impf.) (1)	bin 'go'	bin (impf.) (1)
	il-eh (imp.) (20)		bin-ih (pfv.) (2)
	ko'ox il-o'ob (aux impf.3pl.) (1)		ko'ox (hort.) (1)
k'ax 'tie up'	k'ax-eh (imp.) (2)	kul- 'sit down'	kul-tal (impf.) (1)
	koten k'ax N (aux impf.) (2)		kul-ak (subj.) (1)
	k'ax-a'an (result.) (1)		kul-en (imp.) (2)
pul 'throw'	pul-ik (impf.) (2)	lúub- 'fall'	lub-ih (pfv.) (1)
	pul-eh (imp.) (2)		lub-o'ob (3 <sup>rd</sup> pl. impf./pfv.) (3)
	pul-ah (pfv.) (2)		lub-uk (subj.) (1)
púust 'wipe'	púust (impf.) (1)		
	púust-eh (imp.) (3)		
	púust-a'an (result.) (1)		

Table 9: three-member paradigms at age 2;2

At age 2;2 the following auxiliaries are present in the data:

Táan (PROG)	+ Subject clitics: 1 = tin 3 = tun
Yan (COMP)	Subject clitics: 2 = yan a
Ko'ox (let's go)	ko'ox baxal 'let's play'; ko'ox xok*-eh 'let's read it'; ko'ox chuk*-eh 'let's catch'

Among the subject clitics which are identical with the possessive pronouns, the third person is the most frequent. Concerning the absolutive affixes only the first singular (-en) is used with the imperative meaning, for example: *han-en* 'eat'; *kul-en* 'sit down'; *ok-en* 'enter'. The second person singular -ech is only found in the frozen forms *méek'-ech* 'hug me' and *éem-ech* 'let me down'.

The development of the formation of two and three-member paradigms during the whole analyzed period is shown in table 10:

Age	Number of Verb-Paradigms	
	Two-member	Three-member
1;9	-	-
1;10	2	1
1;11	6	1
2;0	3	2
2;1	7	3
2;2	9	7
Total	27	14

Table 10: increase of two- and three-member paradigms

The two two-member paradigms of age 1;10 belong to transitive verbs and consist of bare roots and the imperative ending -eh. At the same age other three two-member paradigms are formed with intransitive verbs (table 7), but all of them show incorrect forms related to the imperative mood. As all of the forms have imperative or desiderative meaning, they could be defined as "frozen" mini-paradigms. There is a clear increase of paradigm formation from age 2;1 on and predominantly at 2;2. There are only 4 lemmas of the whole corpus which appear in both two- and three-member paradigms: the intransitive verbs *bin*, *lúub*, and the transitive verbs *il*, *méek'*. These lemmas are present in all recordings of the corpus.



#### 4. Conclusion

Considering the child Sandi who we studied and whose spontaneous speech was recorded starting at age 1;9, the data shows that from this age on there is a constant increase of spontaneous and productive use of verbs. Almost 50% of the total analyzable utterances consist of verbs during the whole observed period. Therefore we can conclude that there is no verb/word spurt which could be related to the emergence of mini-paradigms.

The first verb suffix to emerge is the imperative/subjunctive suffix of transitive verbs, followed by aspect markers in both verb classes.

In comparison with the Maya Tzeltal (Brown 1998) and the Maya Tzotzil data (de León 1999) where verbs start to appear regularly with different inflectional and sometimes derivational suffixes at age 2;0, it is not until age 2;1, one month later than in both languages, that this development occurs in our data.

The period of age 1;9 and 1;10 was defined as the premorphological phase because of the presence of the frozen form *méek'-ech* and memorized verb forms which are at the same time the precursors of the first mini-paradigms (whose formation consists of verbal roots and the subjunctive/imperative ending of transitive verbs).

Over the period of age 1;11 and 2;0 we observe a strong morphological activity in new verb forms and meanings which are characteristic of a transition phase. The first three-member paradigms are formed with the suppletive verb *bin* 'go' on the one hand and the transparent verb forms of *mach* 'grasp' on the other. At age 2;1, mini-paradigms increase, there are more and more inflected forms, and the imperative begins to distinguish between both forms correctly - naming the object (root form) and without naming the object (*-eh*). However, the imperative form of the intransitive verbs *-en* in almost all recordings is used with the ending of transitive verbs. This categorical underspecification remains during the whole analyzed period of Sandi's speech.

In the protomorphological phase (2;0 to 2;2) different two- and three-member paradigms of transitive and intransitive verbs are formed. The new categories are: the resultative aspect *-a'an*, the imperfective aspect of transitives *-ik*, the subjunctive of inactive intransitives *-Vk* and positionals *-ak*, and the perfective aspect of transitive verbs *-ah*.

Among the aspect markers the imperfective of transitive and intransitive verbs is increasingly found at 2;1. The perfective aspect<sup>2</sup> appears over the whole analyzed period, but predominantly with intransitive verbs in the third person singular, while with transitive verbs only at the end of the observed period.

Among the total verb lemmas of the analyzed corpus, 17 belong to the intransitive verb class. Most of these latter verbs involved in the formation of mini-paradigms are active intransitives, such as *káal* 'cover', *máan* 'pass by', *bin* 'go', *éem-el* 'descend', *ok-ol* 'enter'; inactive intransitives, such as *lúub-ul* 'fall', *wen-el* 'sleep'; or are positional verbs, such as *kul* 'sit down' and *wa'al* 'stand up'. The relatively frequent use of perfective aspect with intransitive verbs could be explained by the fact that all intransitive verbs of the analyzed corpus are inherently perfective verbs which means that the perfective aspect is unmarked, while the imperfective aspect is marked.

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<sup>2</sup> According to the data on Quiché acquisition, the use of the aspect markers was in constant increase with little variation. The order of acquisition, independent of the 3 subjects, is the following: the perfective aspect, the progressive of intransitive verbs and the intransitive volitives of the verbs 'go' and 'come'. (Pye 1992: 254-255).

Concerning the cross-reference markers of verbal core arguments, at age 2;1 Sandy begins to produce the subject clitics, and from age 2;2 on the data shows a slow development of absolutive suffixes.

As has been seen over the length of the study the child passed from a minimal morphological activity at age 1;9 to a phase of great creative activity at 2;1 to 2;2. From the management of forms principally memorized she passed to a period of applying incipient morphological rules. Many of the errors of underspecification of verb forms in the premorphological phase as well as the frozen form *méek'-ech* and its analogical form *ém-ech* and the supposed overgeneralization of the third person singular of the perfective aspect of intransitive verbs to transitive verbs show us the process in which Sandi selects and rejects certain ways of constructing verbal mini-paradigms. At the end of this observed period it is clear how the reduction in a number of forms without inflection on the one hand and the increasing frequency and diversification of Sandi's verb inflections on the other move in the direction of modular morphology. Obviously the child will have to abandon ways such as the underspecification of the two imperative forms *-eh* and *-en* and her overgeneralizations and eventually she will take some other deadends. Subject and object markers scarcely appear in the protomorphological phase but will be fundamental in the following months, given their relationship with the transitive and intransitive natures of the verbs. Equally, the auxiliaries which are scarcely emerging will determine the expression of moods and aspects.

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