

RED THREAD OF CROATIAN AND YUCATEC MAYA:  
WHAT COULD BE COMMON  
IN THE TWO LANGUAGES?

MELITA KOVAČEVIĆ  
Universidad de Zagreb

BARBARA BLAHA PFEILER  
IIFL y CEPHCIS, UNAM

MARIJAN PALMOVIĆ  
Universidad de Zagreb

INTRODUCTION

In the mid 1990s Wolfgang U. Dressler assembled a group of linguists and psycholinguists to explore early acquisition across languages. The emphasis was put on morphology as observed in more than a dozen languages of different language types. The Austrian Academy of Science has hosted this international project, entitled Crosslinguistic Project on Pre- and Protomorphology in Language Acquisition, recognizing the importance of exploring child language acquisition in languages that, among other linguistic features, vary in morphological richness.

The languages included in the project were from the Indo-European family (German, French, Italian, Spanish, Dutch, Swedish, Lithuanian, Croatian, Polish, Russian, Greek, and Ukrainian); the Finno-Ugric family (Estonian, Hungarian, Turkish, and Finnish); the Semitic family (Hebrew, Arabic, and Palestinian); and the Caucasian family (Georgian); as well as Basque and the American-Indian language Yucatec Maya. The project has been exploring the acquisition of morphology from its earliest stage, called pre-morphology, up to the development of the entire morphological system—morphology proper (Dressler, 1994; Dressler & Karpf, 1995). In a way, one can say that the idea was to gain insight into all layers of morphological development in all those languages in order to determine various generalizations based on shared linguistic properties vs. those that are language-specific.

In all those languages, data were collected longitudinally for one or more children following the same ground rules for data collection and analysis. All the recordings

were performed on a regular basis in a natural environment in spontaneous communication between child and caretaker. The main methodological support was provided by the CHILDES system (MacWhinney, 1995), and all the input and output language was coded according to CHAT standards in order to enable application of CLAN analysis programs. Such a methodological decision (even when dealing with very different languages) made it possible to apply common analyses.

Diachronically, the project focused on different linguistic categories observed across languages. Of course, cross-linguistic comparison has not been equally applicable for each language, and not all linguistic categories could be equally treated in all languages. The best candidates for crosslinguistic comparison have been universal categories such as nouns and verbs, both of which are present in all languages and emerge early in acquisition (Gopnik and Choi, 1995; Tardif, 1996).

All those who are interested in language acquisition and motivated to compare or to contrast languages know how scientifically tricky, but challenging, the question of defining a proper analytical tool is. Contrary to classical typological studies in which generalizations across languages should provide formal descriptions of universal traits, in cross-linguistic acquisition studies many more factors, not exclusively linguistic, are intertwined (Gopnik and Choi, 1995). At least two major factors influence the language development and output language of the child; cultural milieu and cognitive development. Because of these confounding facts it is common to compare languages having the same typology and genetic origin and belonging to similar cultural circles.

This paper was motivated by two anecdotal occasions, the first being the IASCL (International Association for the Study of Child Language) meeting in San Sebastian in 1999, when a number of papers focused on the analysis of the acquisition of nouns and verbs were presented suggesting that typologically different languages showed similar patterns in the acquisition of nouns and verbs, with nouns losing their presumed prevalence. The second one was a regular annual Project meeting in Vienna, when the coauthors of this paper detected a shared pattern of early acquisition of verbal systems in the two languages. This was the final trigger to set the research goal of exploring what could explain the observed similarities between two languages that hardly share any linguistic similarities. The first version of this work was presented at the IASCL conference in Madison in 2002.

Interesting questions arise from these similarities and differences in the acquisition of Croatian and Yucatec Maya:

Why do Croatian and Yucatec Maya children during early acquisition prefer nouns, while after that, verbs become dominant in both corpora? Comparing the structures of Croatian and Yucatec Maya, we found two properties which they share – namely, there is a high rate of elision of lexical arguments which leaves the verb in a salient position in an utterance; and there is more overtly marked morphology on verbs than on nouns.

This study looks for similarities in language acquisition in two typologically different languages that share some formal properties. In both languages, verbs can stand for a whole utterance; the free word order makes it possible for verbs to be posed in the first or last position of the utterance. The aim of this study is to analyze these linguistic factors and the role they play in the early development of verbs in these two languages.

## DESCRIPTION OF THE TWO LANGUAGES

### Croatian

Noun system. In Croatian, nouns have three genders, two numbers and seven cases. The three genders are masculine, feminine, and neuter. Masculine and feminine nouns make up about 85% of all nouns, while neuter nouns make up about 15% of all nouns (in our corpus the percentage of neuter nouns is a bit smaller, about 10%). Among masculine nouns there is a distinction between animacy and inanimacy (Accusative = Genitive for animate and Accusative = Nominative for inanimate nouns). Furthermore, there are three main declension classes: class *e*, class *a* and class *i* (the name of the class is the ending in Genitive Sg.). The majority of feminine nouns belong to class *e* (all except the feminine nouns that end with a consonant, these belong to the class *i*). The majority of masculine and all neuter nouns belong to the class *a*. The noun class defines the paradigm, i.e. the class of case markers that characterize each noun class.

There is a high degree of homophony in Croatian noun system (Jelaska et al., 2002). All nouns have same forms in Dative and Locative singular (grammars make distinction in the accent, but this distinction is generally lost in spoken Croatian, even in the standard language of radio and TV). Masculine nouns have equal forms in Genitive and Accusative or Nominative and Accusative (depending on animacy) and Vocative is often equal to Nominative. For neuter nouns, all

TABLE 1. Homophony in the croatian noun system

Cases (in singular)	Feminine case endings (class <i>e</i> )	Masculine class endings (class <i>a</i> )
Nom.	-a	-∅
Gen.	-e	-a
Dat.	-i	-u
Acc.	-u	-a, -∅
Voc.	-o, -a	-e, -∅
Loc.	-i	-u
Instr.	-om	-om, -em

Nominatives and Accusatives have the same case endings. As for the plural forms of masculine, feminine, and neuter nouns, Datives, Locatives, and Instrumentals all have the same case endings. Therefore, there is no noun with fourteen different forms in all seven cases in singular and plural. Feminine nouns that belong to the class *e* show the highest degree of diversity: Table 1 can serve as a good illustration (feminine case endings are shown in the left column, while masculine case endings are shown on the right. Homophonous endings are connected by lines).

Verb system. Croatian has a rich verbal system. In Croatian there are seven tenses, two aspects, two numbers, two moods, conditionals, optatives, an imperative, and an infinitive. The verbal paradigms are organized into 6 verbal classes (Barić et al. 1997), depending on the thematic vowel and the relation between the present and infinitive stems. The number of homophonous forms is much smaller in verbs than in nouns. However, it should be noted, first, that some tenses are not used in spoken Croatian or are used rarely (imperfect and aorist). Second, the choice of aspect restricts the choice of tense: in simple sentences, perfective verbs cannot be used in the present, but only in the future and the perfect and future II is used only with imperfective verbs.

In a simple sentence, the verb carries the information about the subject (1<sup>st</sup>, 2<sup>nd</sup>, or 3<sup>rd</sup> person, and singular or plural) and the pronoun is usually dropped. Accordingly, Croatian is usually said to be a pro-drop language. When the subject agrees with the verb in the 3<sup>rd</sup> person —i.e., when the subject is a noun and when it is known from the context— the subject is usually dropped. A proper answer to the question “What are you doing?” would be just

- (1) Čit-am.  
 read-1sg:Pres  
 ‘(I) am reading.’

and that would constitute the whole sentence. Depending on the context, the object can be dropped as well. Imagine a man repairing his car and being visited by a friend. If he asks “What are you doing with your car?”, the man would answer just

- (2) Popravlj-am  
 repair-1sg:Pres  
 ‘(I) am repairing (it).’

In other words, it is not only the subject pronoun that can be omitted. In fact, everything but the focus of the sentence can be dropped.

Word order. The canonical word order in Croatian is SVO, as in

- (3) Tat-a                      čit-a                      knjig-u.  
 Daddy-Nsg                  read-3sg:Pres              book-Asg  
 ‘Daddy is reading a book.’

- (3a) Čít-a.  
 read-3sg:Pres  
 '(He) is reading (it).'

However, the word order is relatively free: Číta tata knjigu; Knjigu číta tata; Knjigu tata číta; Číta knjigu tata are all perfectly grammatical Croatian sentences differing in focus or, perhaps, style. The information about who is doing what to whom is encoded in case markers, anyway.

Sometimes intransitive verbs could also take initial position in two word utterances such as

- (4) Id-e                      mam-a.  
 go-3sg:Pres              mother-Nsg  
 'Mother is coming.'

#### Yucatec Maya

In terms of typological parameters, Yucatec Maya is often listed as a verb-object-subject (VOS) language<sup>1</sup>. Subjects and direct objects are not marked for case. Yucatec Maya is a head-marking language: the verbal complex can function on its own as a complete sentential proposition (Lucy 1994: 627). The predicate agrees in person, and sometimes in number, with its subject and direct object. The agreement system is split ergative conditioned by aspect, it formally equates subjects in intransitive clauses and direct objects in transitive clauses, cross-referencing both by the same set of affixes. These two relations together constitute the absolutive relation. The affixes which cross-reference absolutives are termed SET B by Mayanists. Subjects of transitive clauses and of intransitive clauses in imperfective aspect (ergatives) are cross-referenced by a different set of affixes which Mayanists call SET A.

There are three major lexical classes: nouns, verbs, and adjectives. Only members of these three lexical classes can be inflected. These are the only members of lexical classes which can function as (heads of) predicates.

Noun system. In Yucatec Maya, nouns are specified by possessive pronouns, numerals, classifiers, and adjectives. Plural marking is optional; the singular is marked by numerals with classifiers. Possessive markers and the personal markers used for verbs are identical. The example (5) shows that nouns also can head phrases in predicate function:

<sup>1</sup> Actually works addressing the word order of this language in detail conclude that Yucatec Maya has two unmarked word orders, SVO and VOS (Durbin and Ojeda, 1978; Hofling, 1984; Briceño, 2002).

- (5) Wíinik-en.  
man-B.1SG  
'I am a man.'

With respect to acquisition of noun morphology, this is characterized first by deictic clitics and topicalization suffixes; second by a pluralization suffix with animate nouns; and third by possessive prefixes (Flores Vera, 1998).

Verb system. Verbs are distinguished between transitive and intransitive verbs according to their argument marking properties. In the verb complex, person, mood, and aspect are represented by sets of inflectional affixes; non-emphatic personal pronouns do not occur in surface structure, and the lexical arguments can be dropped in the adult language.

Intransitive verbs (6) and transitive verbs (7) can take initial position:

- (6) Túun xook-Ø.  
PROG:A.3 read-INC  
'He is reading.'
- (7) Túun xok-ik le hu'un in taata-o'.  
PROG:A.3 read-INC(B.3.SG) DEF paper A.1 Daddy-DIST  
'My father is reading the book.'

Word order. The example (7) illustrates basic word order VOS, as well as the fact that neither subject nor object is case-marked. The verb bears a clitic, glossed A.3, which cross-references the 3<sup>rd</sup> person transitive subject. The direct object, being 3<sup>rd</sup> person, is marked by no overt affix. (In the glosses, "A.1 = Set A, 1<sup>st</sup> person, "B.1" = Set B, 1<sup>st</sup> person, etc.).

According to focus, the following word order is possible: SVO.

- (8) Taata-e' túun xok-ik le hu'un-o'.  
Daddy-TO PPROG:A.3 read-INC(B.3.SG) DEF paper-DIST  
'Daddy, he is reading the book.'

Dropping the subject and object lexical arguments, we get:

- (9) Túun xok-ik.  
PROG:A.3 read-INC(B.3.SG)  
'He is reading it.'

To conclude: despite the typological differences between these two languages there are features which contribute to the verb salience in colloquial adult speech; these are verbal independency related to pro-drop characteristics, mor-

phological richness, and word order. In both languages, lexical arguments and independent pronouns (i.e., pronouns that stand as separate words) are usually dropped and the verb (i.e., the verbal complex in Yucatec Maya) ends up in the first position of the utterance or constitutes the whole utterance; the word order varies according to focus. The question is what role these features play in the acquisition of those two languages. Could the observed commonalities be explained in terms of those common linguistic traits? Do these common linguistic traits carry heavier ponders of the differences that exist between the two languages?

#### DESCRIPTION OF THE DATA

##### Croatian

The data analyzed here are transcripts of the speech of one Croatian child, Antonija. The data are part of the Croatian child language corpus that is part of CHILDES (Kovacevic 2003, <http://childes.psy.cmu.edu/data/slavic/>).

Antonija's parents are middle-class urban dwellers. Both parents have university education. Antonija was born and raised in Zagreb and speaks the Zagreb Štokavian dialect, which is close to standard Croatian.

Antonija's corpus consists of 42 files of transcribed tape-recording sessions conducted from age 1;3 to 2;8. There were, roughly, three recordings a month. The data from one month, 1;8, is missing due to family reasons.

##### Yucatec Maya

Armando's family lives in Yalcobá, a Mayan hamlet in the southeastern part of the state of Yucatan in Mexico, the father is a peasant and the mother is a housewife. Armando was raised in the heart of an extended family, together with his grandmother, uncles and aunts, and cousins. The dialect spoken in the southeastern part of the peninsula is characterized by its different first plural of the Set A markers, as well as by morphonological contraction and some lexical variation.<sup>2</sup>

TABLE 2. The size of antonija's and armando's corpora

CHILD and INPUT	No. of words (tokens)	CHILD and INPUT	No. of words (tokens)
Antonija	12878	Armando	3156
Input	34998	Input	1546
Total	47876	Total	4702

<sup>2</sup> The native language of Yucatan is known as the most homogenous language of all Mayan languages.

Armando's corpus consists of 26 recording sessions of about 60 minutes each, which were conducted from age 1; 8 to 2;8. For this comparison of data we considered 2 recordings a month.

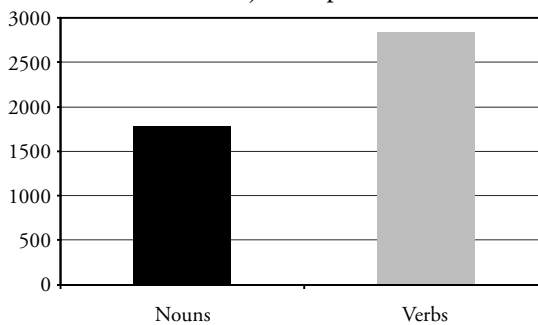
All data from both children and the input were transcribed and morphologically coded according to CHILDES. All analyses were performed using CLAN programs. The majority of input data in both corpora come from the children's mother, but also their fathers, grandmothers, grandfathers, and aunts participated in the sessions. Table 2 gives the basic data about both corpora.

#### DATA ANALYSIS

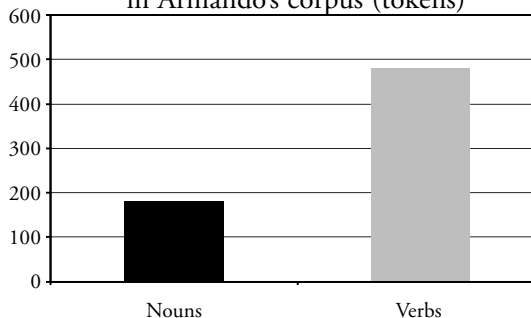
The first basic analysis that was performed was an analysis of the total number of nouns vs. verbs (tokens) produced in the corpus. Despite the apparent quantitative differences between the corpora, we found similar relations of noun and verb tokens in the two corpora.

In Antonija's entire corpus there are 1,780 noun tokens and 2,842 verb tokens (auxiliary verbs excluded). In the input language there are 5,396 noun tokens and 7355 verb tokens (auxiliary verbs excluded). In the Armando's corpus for Yucatec

**FIGURE 1.** Total number of nouns and verbs in Antonija's corpus (tokens)



**FIGURE 2.** Total number of nouns and verbs in Armando's corpus (tokens)





Maya there are 643 noun tokens and 1066 verb tokens. In the input language there are 182 noun tokens and 480 verb tokens.

Verbal prevalence. A high level of overlap in the two languages has been observed. In both the Yucatec Maya and the Croatian corpora. Both Armando and Antonija produced significantly more verbs than nouns (Croatian: 1780–2842; Yucatec Maya: 643 - 1066) (see Figure 1 and 2).

Developmental course. However, this was just a general indicator of the total production of two linguistic categories, as it displayed no developmental course. This is why the goal was to gain better insight into the developmental process in the children’s language acquisition, by taking into consideration input language as well.

FIGURE 3. Longitudinal data: nouns and verbs (types), Antonija

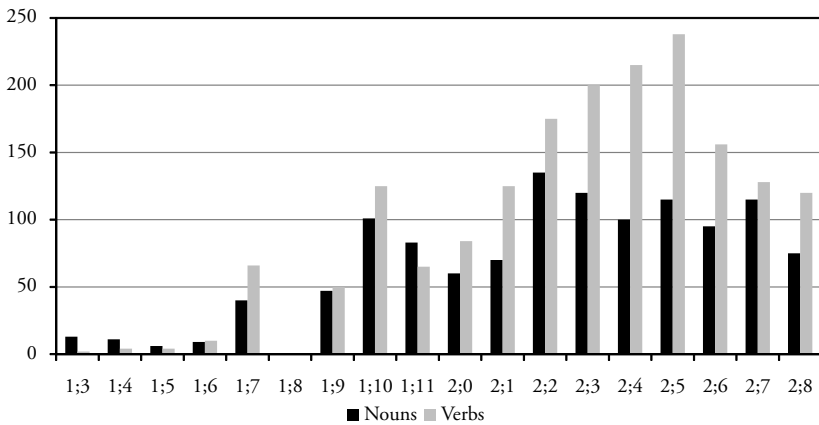


FIGURE 4. Longitudinal data: nouns and verbs (types), Antonija’s input

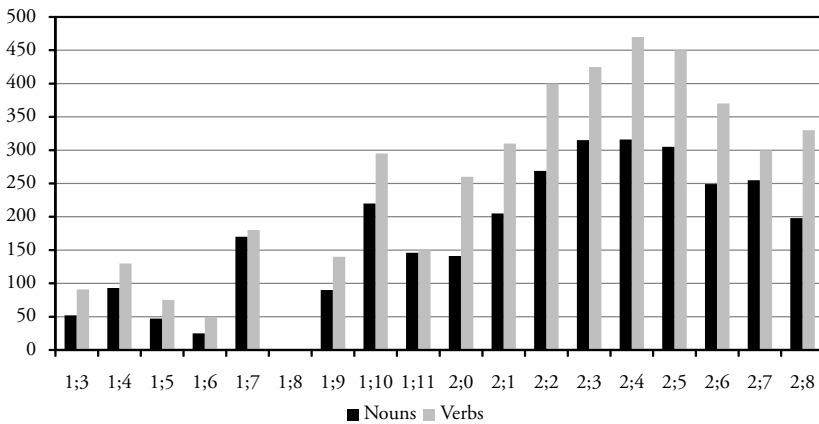


FIGURE 5. Longitudinal data: nouns and verbs (types), Armando

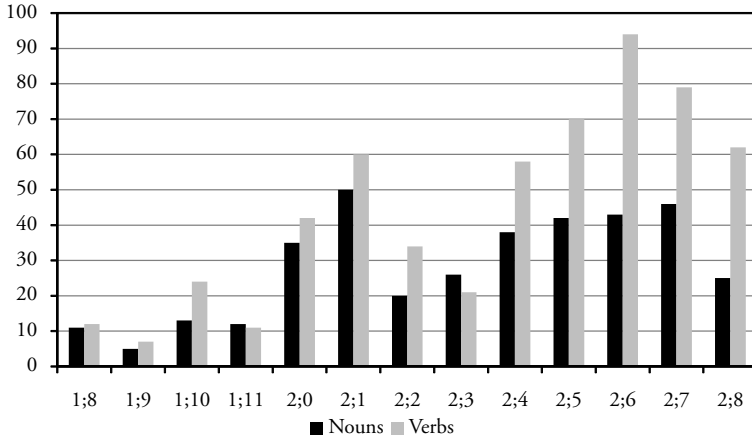
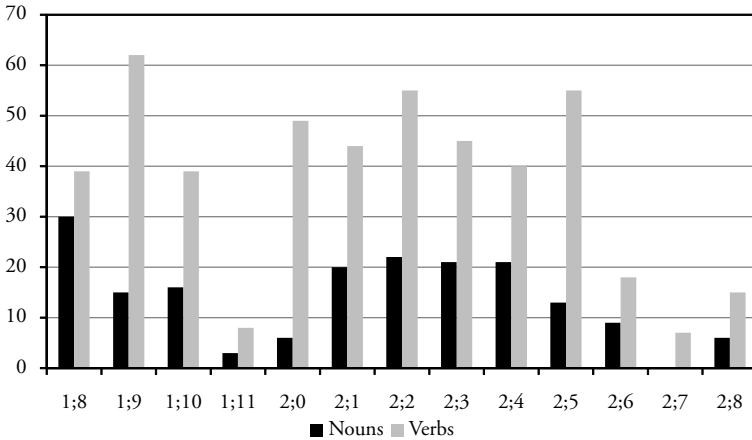


FIGURE 6. Longitudinal data: nouns and verbs (types), Armando's input



Figures 3 and 4 show the data, month by month, both for the child's speech and for the input speech. The verbal prevalence is constant, regardless of the age of the child in each corpus (see also Figures 5 and 6 for the Yucatec Maya data).

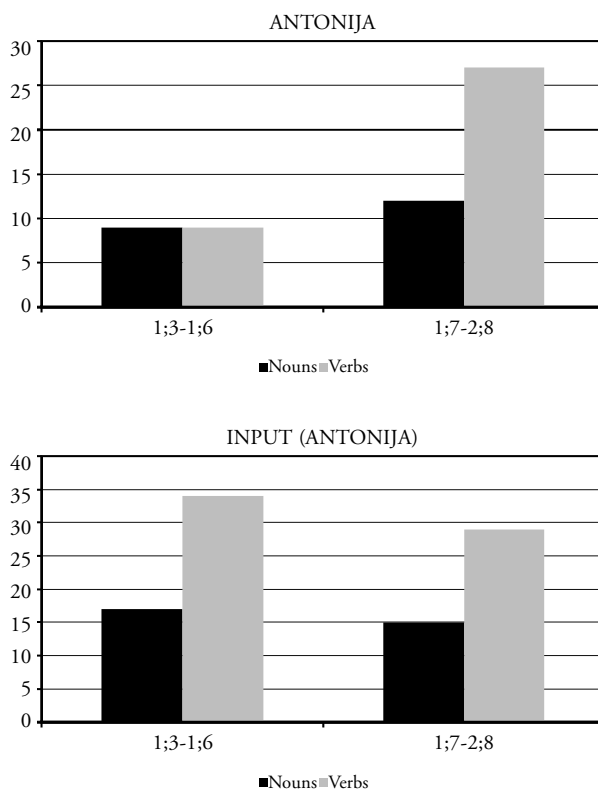
The ratio between production of nouns and verbs in the input language is relatively similar in the two languages, although the overall production in Croatian seems greater. However, this is affected by the size of the corpora. The difference between the size of input language in Croatian and Yucatec Maya could be influenced both by the personal style of adults and, possibly, cultural differences. But whatever the differences are, the ratio between verbs and nouns in both child

language data follow similar developmental patterns in which, as the child grows, it becomes more prominent.

Two phases of verb acquisition. The Croatian and Yucatec Maya data indicated two distinctive phases in the acquisition of verbs. In the first phase, the number of produced nouns and verbs was similar, but in the second phase the production of verbs increased significantly. In the second phase, the production of verbs was twice as high as the production of nouns. While the number of nouns increased at a slower pace, the number of verbs multiplied faster (Figures 7-8 for Croatian and 8-9 for Yucatec Maya data).

A significant developmental switch was noticed in the corpora of both languages when the production of verbs “took over” the production of nouns. In other words, it seems reasonable to argue that in the first phase extragrammatical factors determine the priority of nouns, as in many other significantly investigated languages (e.g., Bates *et al.*, 1994). A partial explanation could be found in extragrammatical operations according to the concept of a pre-morphological

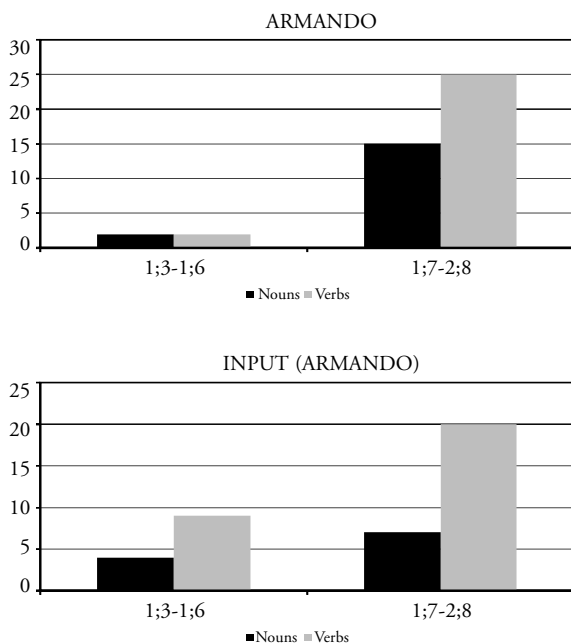
**FIGURE 7, 8.** The two observed phases in the acquisition of nouns and verbs in croatian (in %)



stage (Dressler & Karpf, 1995); also, it could be interpreted as the influence of referential parental style, with lot of object naming in the first phase; and/or the cognitive “easiness” of nouns.

The ratio of nouns and verbs in the input language proved to be more or less constant; in fact, it reflects the ratio of these two categories in normal adult language. However, the total number of tokens (and later, diversity of types) did increase in time due to the intuitional simplification of child-directed speech to a younger child.

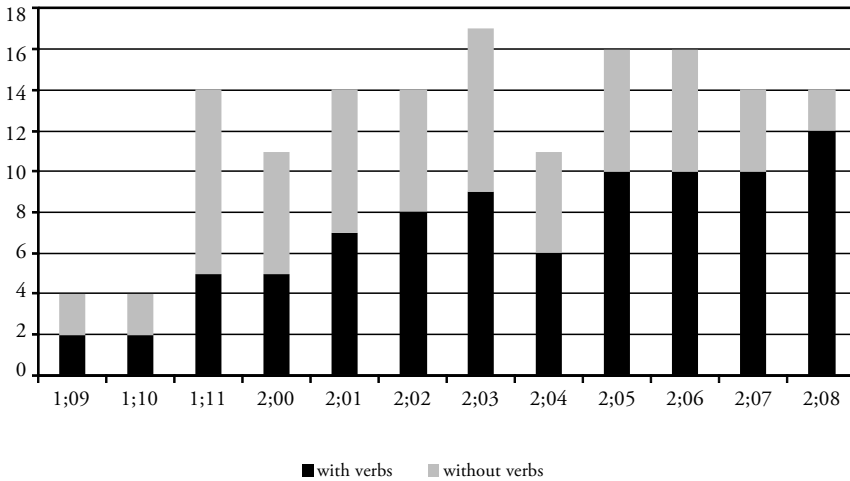
FIGURE 9, 10. The two observed phases in the acquisition of nouns and verbs in yucatec maya (in %)



Early syntax. Soon, certain grammatical features of language seem to start influencing the acquisition process (Jelaska & Kovačević 2001). Accordingly, another syntactic category, the core of the sentence structure, emerges as a more prominent category in language production. This steep increase we consider to be a verb spurt, which probably plays the same role in syntactical development as word spurt generally does. This increase is not only an increase in verb types and/or tokens, but is a general increase in lexical items (e.g. Barrett 1995). In Croatian, verbs are perceived as the words that open positions for every other syntactic category (Katičić, 2002). When compared with the input data in Croatian, it is interesting to notice that the ratio of nouns and verbs production in both phases (according to phases in child language) is similar and corresponds to the ratio of

nouns and verbs production in adult language generally. Another point worth mentioning is that the ratio of nouns and verbs in the second phase in the child language and child-directed speech is comparable (Kovačević, 2005). An increase in the number of two-word utterances with verbs is clearly visible (see Figure 11). It corresponds to the more complex messages that Antonija is able to encode: two-word utterances without verbs are of the form *još+N* ‘more+N’, while two-word utterances with verbs can encode a much greater variety of meanings.

FIGURE 11. The ratio of two-word utterances with verbs and without verbs (croatian)



In Yucatec Maya the data are quite different: there is no noun spurt in the early acquisition, as was testified by Martín Briceño (1998)<sup>3</sup>. However, a recent study on early acquisition data in Yucatec Maya (1;03 to 1;07) shows that the child does make a formal distinction between words which refer to objects and those which refer to activities from age of 1;3 on (Pfeiler, 2006). The data show that verbs are expressed with higher frequency than nouns from the age of two years on. From that age on, the verbal morphology gets richer, but the verbal complex at the end of the observed data —age 2;8— still is not completely present in Armando’s expressions. First, verbal roots are expressed with or without status-mood suffixes and only later on with the aspect prefixes and clitics representing the cross-reference markers for subject and object.

Discussion. What kinds of questions have been raised by these data? First, how can we explain the fact that there are two developmental phases regarding the

<sup>3</sup> Studies on early lexical acquisition in Yucatec Maya of two children of different ages show that nouns and verbs are used with almost the same frequency. For example: a speech sample with MLU 1.5 (which corresponds to age 1; 9.27 to 1;10.17) was selected: 25 types of verbs and 21 common nouns (without counting nicknames) were reported (Martín Briceño, 1998).

ratio between nouns and verbs? Second, why do verbs take over in the course of development? Third, why is the ratio of nouns and verbs constant in the input language? Finally, can all of the observed differences be explained by language structure itself?

Aiming to find answers to the above questions, we extracted three language aspects that could provide explanations (?) for the observed language behavior. These are morphological richness, verbal independency, and free word order - three common trees in the otherwise very different landscapes of our two languages. Although it seems that one can say that we are comparing two incomparable languages, especially with the aim of describing developmental processes, it seems to us that defining these three features, which are perceived as “second order” features, regardless of articulated typological differences, can be a common denominator for observed similarities in patterns of language acquisition. In the case of Croatian, both nouns and verbs are highly morphologically marked, but verbs significantly more than nouns. This is even more true if we consider the homophony present in the noun system (see above). More overt morphological marking carries more information for the speaker as well, and thus allows the speaker certain syntactic reductions (such as the elision of lexical arguments), as the examples show. This could play an even more important role in early child language development when a child has a limited lexicon size and when he/she is motivated to convey the message in the most efficient way and according to his/her own limits. Being a motivated communicator from very early on, a child “detects” the most suitable linguistic tools. As the examples from grammar textbooks—but also from child language corpora— show, in Croatian, when asked, “Are you eating a cookie?” a child can just produce a one-word verb utterance, such as:

- (10) Jed-em.  
eat-1sg:Pres  
'(I) am eating (a cookie).'

This is exactly what happens very early in child language development when the verbal system takes over nouns even in the one-word utterances. This is what we identified as verbal independency connected to morphological richness. Verbal independency would not work if all information conveyed in the verbal morphology such as tense, aspect, person, number, etc. could not be encoded in one word only, as in Croatian or, similarly, in the verbal complex in Yucatec Maya (example 11).

- (11) Tin                    haant-ik  
PROG:A.1    eat-INC(B.3.SG)  
'I am eating it.'

The syntactic features could contribute in the same direction: the possibility of dropping everything but the verb (or, in Yucatec Maya, the verbal complex) and still keep the grammaticality of the structure is another key aspect of verbal (complex) independence. Sometimes pragmatic factors can play an important role in dropping any constituent, depending on the context, but the fact is that a child detects this possibility very early on.

The third factor, relatively independent from the above two —morphological richness and (pro)-drop-(obj) features— that can be observed in the gathered data is word order. Both languages have relatively free word order. In Croatian, the canonical word order is SVO. However, in two-word utterances in child language or child-directed speech SV sentences may become VS while VO sentences remain VO. In other words, the verb is in the sentence-initial position, as in the following examples (12, 13):

(12) Jed-em            jabuk-u.  
eat-1sg:Pres    apple-Acc:sg:fem  
'(I) am eating an apple.'

(13) Spav-a            brac-o.  
sleep-3sg:Pres   brother(hyp)-Nom:sg:masc  
'Brother is sleeping.'

## CONCLUSION

In the comparison of two typologically different languages, Croatian and Yucatec Maya, three typological features were taken into account: morphological richness, pro-drop, and word order. It is argued that these features bring about verbal independency. This 'second-order' feature of the two typologically distant languages accounts for verbal primacy very soon after the language acquisition process starts. The fact is that these three features are not identically represented in both languages: Croatian is a typical pro-drop language, while Yucatec Maya only is comparable in terms of dropping lexical arguments as well as independent pronouns, but not cross-reference person markers; regardless of their typological differences in morphology (inflectional vs. agglutinative), both languages have rich morphology on verbs; the fact that in both languages the word order is relatively free, makes for a high percentage of utterances in which the verb is in initial position. This similarity in unmarked word order of Croatian and Yucatec Maya may further support our conclusions, particularly since the order of intransitive clauses in Yucatec is overwhelmingly VS, a situation similar to the one described for Croatian.

Of course, any of these features can be found in other languages, but it is their "package" —their triadic appearance in the language structure— that can

account for the observed language behavior. This red thread revealed between the two languages makes their language acquisition processes comparable, in particular in terms of the acquisition of verbs and nouns as basic syntactic categories, although belonging to two typologically distant languages.



## REFERENCES

- BATES, Elisabeth et al.  
1994 "Developmental and Stylistic Variation in the Composition of Early Vocabulary", *Journal of Child Language* 219: 85-124.
- BARRETT, Martin  
1995 "Early Lexicon Development", *The Handbook of Child Language*, pp. 362-392, Paul Fletcher y Brian MacWhinney (eds.). Oxford, Basil Blackwell.
- BARIĆ, Eugenija et al.  
1997 *Hrvatska gramatika [Croatian Grammar]*. Zagreb, Školska knjiga.
- BRICEÑO CHEL, Fidencio  
2002 "Topicalización, enfoque, énfasis y adelantamiento en el maya yucateco", *La organización social entre los mayas prehispánicos, coloniales y modernos*, pp. 374-387, Vera Tiesler Blos, Rafael Cobos y Merle Greene Robertson (eds.). México, CONACULTA e INAH.
- DRESSLER, Wolfgang U.  
1994 "Evidence from the First Stages of Morphology Acquisition for Linguistic Theory: Extragrammatic Morphology and Diminutives", *Acta Linguistica Hafniensia* 27: 91-108.
- DRESSLER, Wolfgang U. y Annemarie KARPf  
1995 "The Theoretical Relevance of Pre- and Proto-morphology in Language Acquisition", *Yearbook of Morphology*, 1994: 99-122.
- DURBIN, Marshall y Fernando OJEDA  
1978 "Basic Word Order in Yucatec Maya", *Papers in Mayan Linguistics* 6: 69-77.
- FLORES VERA, Miguel A.  
1998 *La adquisición temprana del maya yucateco*, Tesis de licenciatura en lingüística y literatura. Mérida, UADY.
- GOPNIK, Alison y Soonja CHOI  
1995 "Names, Relational Words and Cognitive Development in English and Korean Speakers: Nouns are not Always Learned Before Verbs", *Beyond Names for Things: Young Children Acquisition of Words*, pp. 83-90, Michael Tomasello y William. E. Merriman (eds.). Hillsdale, NJ. Lawrence Erlbaum Associates.
- HOFLING, Charles Andrew  
1984 "On Proto-Yucatecan Word Order", *Journal of Mayan Linguistics* 4 (2): 35-64.

- JELASKA, Zrinka y Melita KOVAČEVIĆ  
 2001 “Odnos glagola i imenica u ranome jezičnome razvoju” [The relation between verbs and nouns in early language development], Proceedings of II Slavistik Conference, pp. 441- 452, Dubravka Sesar, Ivana Vidović-Bolt (eds.). Zagreb, Hrvatsko filološko društvo.
- JELASKA, Zrinka, Melita KOVAČEVIĆ, y Maja ANDEL  
 2002 “Morphology and Semantics – The Basis of Croatian Case”, Pre- and Protomorphology: Early Phases of Morphological Development in Nouns and Verb”, Maria Voeikova y Wolfgang U. Dressler (eds.). München, Lincom Europa. pp. 177-189
- KATIČIĆ, Radoslav  
 2002 Sintaksa hrvatskoga književnog jezika [Syntax of Croatian Standard Language]. Zagreb, Nakladni zavod Globus. HAZU.
- KOVAČEVIĆ, Melita  
 2005 “Semantika glagolskog leksikona u ranome jezičnom usvajanju” [Verbal lexicon semantics in early language acquisition], Semantika prirodnoga jezika i metajezik semantika [Natural language semantics and metalanguage of semantics], pp. 405-417. J. Granić (ed.). Zagreb-Split, HDPL.
- LUCY, John A.  
 1994 “The Role of Semantic Value in Lexical Comparison: Motion and Position Roots in Yucatec Maya”, *Linguistics* 32: 623-656.
- MACWHINNEY, Brian  
 1995 The CHILDES Project: Tools for Analyzing Talk, Mahwah, NJ, Lawrence Erlbaum Associates.
- MARTÍN BRICEÑO, Enrique  
 1998 Jugar y conjugar. La flexión verbal temprana en la adquisición del maya yucateco. Un estudio de caso (Tesis de licenciatura en lingüística y literatura) Mérida, UADY.
- PFEILER, Barbara  
 2002 “Noun and Verb Acquisition in Yucatec Maya”, Pre- and Protomorphology: Early Phases of Morphological Development in Nouns and Verbs, Maria Voeikova y Wolfgang U. Dressler (eds.). München, Lincom Europa. pp. 75-83.  
 2006 “Polyvalence in the Acquisition of Early Lexicon in Yukatek”, *Lexical Categories and Root Classes in Amerindian Languages*, Ximena Lois y Valentina Vapnarsky (eds.). Frankfurt: Peter Lang. pp. 319-341.
- TARDIF, Twila  
 1996 “Nouns are Not Always Learned Before Verbs. Evidence from Mandarin Speakers in Early Vocabularies”, *Child Development* 59: 411-419.