

*Maja Anđel (1), Sabine Klampfer (2), Marianne Kilani-Schoch (3), Wolfgang U. Dressler (2), Melita Kovačević (1)*¹

Acquisition of verbs in Croatian, French and Austrian German — an outline of a comparative analysis

Research of child language acquisition, i. e. comparisons of acquisition in typologically different languages, play a significant role in shedding some light on universal linguistic features. The aim of our paper is to compare acquisition of verbal morphology in three languages belonging to different branches of Indo-European languages and to compare developing verbal systems in children as well as the order of emergence of verbal forms in each of them. Furthermore, the results on regularities occurring in all three languages have been discussed. The analysis of process of developing verbal system within each particular language is based on tense and mood. Provided error analysis gave us some further insights into the linguistically active role that child takes at certain stage of its linguistic development. The intention of this paper is to point to relevant aspects of developing linguistic system common to all three analysed languages, but at the same time drawing the attention to those language segments that need to be taken into consideration due to the limitations imposed by the language variations.

1. Introduction

The aim of this paper is to present a brief descriptive comparison of verb acquisition in three children acquiring three languages from different branches of Indo-European and differing in their inflectional richness. In order to perform a qualitative and quantitative comparison, we have decided to limit our analyses to the acquisition of verbs. Due to the fact that this kind of language

¹ Department of Speech and Language Pathology, Faculty of Special Education and Rehabilitation, University of Zagreb; (2) Department of Linguistics, University of Vienna; (3) University of Lausanne

acquisition analysis has started in Croatian relatively recently, we were able to analyse only five months of Croatian data.

All the data presented in this paper have been analysed and classified within the framework of the Crosslinguistic Project on Pre- and Protomorphology in Language Acquisition (Dressler & Karpf 1995; Dressler ed. 1997).

The main premises of this framework are:

1. That linguistic modules are not genetically inherited (cf. Karmiloff-Smith 1992);
2. That in the premorphological phase a separate, distinct grammatical model has not yet been developed and that morphological operations are handled by the child via more general cognitive principles;
3. That the system of morphological grammar develops only in the protomorphological stage; in accordance with the universals of Natural Morphology (cf. Kilani-Schoch 1988, Dressler et al. 1987);
4. That the protomorphological stage ends when the subsystems of inflectional, derivational and compounding morphology start to develop, i. e. when the above-mentioned grammatical modules pass beyond their initial stages;
5. That modules originate from earlier global systems through dissociation (cf. Karpf 1990, 1991, 1994).« (Dressler & Karpf 1995)

In section 2 we will give a short and simplified description of the verbal systems of Croatian, French and (Austrian) German, i. e. of the adult target systems of the input language (the language spoken in the environment of the investigated children by their parents, relatives, etc.). In section 3 we will describe the investigated children, data analysis and methods. It is important to emphasise that the children are to be taken as subjects of the investigation, with no intention of making inferences about the acquisition of any language in general, but only to show the developmental tendencies in each one of the languages studied. In section 4 the individual results of the quantitative analyses of verb production, errors, tense and mood will be presented and compared. The conclusion in section 5 will focus on summarising and explaining tentative pertinent results which should be further elaborated in future research.

2. The verbal systems of Croatian, French and (Austrian) German

Croatian

The verb in modern spoken Croatian has three persons, two numbers, two verbal aspects and four tenses (Barić et al., 1997): present, perfect, future I and future II.

Person and number are fused in Croatian and expressed by verbal suffixes. There exist two more past verbal tenses in Croatian, imperfect and aorist, but their use is nowadays limited to highly stylised literary texts, therefore they are irrelevant for our purposes. A child may only hear them in fairy tales and it is not usual even for adults to produce them in the spoken language. This is comparable with the position of the simple past in French, and in some ex-

tent this is also true for the preterite tense (also a simple past tense) in Austrian German. Despite its presence in Northern German dialects, it is more and more replaced by the compound past forms in Austrian German. The present tense, the only simple, i. e. synthetic verbal form (if we exclude aorist and imperfect), is formed by adding the respective personal suffixes to the present stem. A part from the present tense and imperative, all other verbal forms to appear in early language of a child acquiring Croatian are compound. The perfect tense (e. g. *radio sam* (masc.) / *radila sam* (fem.) — 'worked I have') consists of the unstressed present tense form of the auxiliary verb *biti* — 'to be' and the active verbal adjective, which is to some extent comparable to the participle in other languages. Unlike the participle in the other two languages, the Croatian verbal adjective obligatorily bears the information on gender (*radio* (m), as opposed to *radila* (f) — 'worked'). The future I is formed by the present tense form of the verb *htjeti* — 'to want' and the infinitive (e. g. PRO *ću raditi* — 'I will work'). It has to be mentioned that this particular form is only possible if the pro is overtly expressed. Yet because of the possibility of pro dropping in Croatian, the subject does not have to be overt. In such cases, an inversion of the main verb and the auxiliary takes place (e. g. PROdrop *radit ću* — 'work I will'). In such cases, the infinitive of the main verb loses its final -i (*radit-i* — 'to work'). The future II is formed of the perfective present form of the verb *biti* — 'to be' and the active verbal adjective (e. g. *budem radio* ('I will have worked')).

Three verbal moods have inflected forms, indicative, imperative and conditional. The present indicative and imperative are simple forms, whereas the conditional is composed of the aorist forms of the verb *biti* and the active verbal adjective.

As for the verbal voice, the passive is relatively rarely used in Croatian, but certainly less frequently than in some other languages, like for instance in English. The passive voice can be expressed in three different ways: (a) Using the reflexive construction, whereby it is important to note that the case form of the grammatical subject (animate) can be given in both nominative or accusative, which slightly changes the meaning of the passive construction — *Dječak se kupa* — 'The boy is taking a bath (and either washing himself or being washed by someone)' as opposed to *Dječaka se kupa* — 'The boy is taking a bath (and being washed by someone else)'; (b) Using the 3sg without naming the agent — *Dječaka kupaju* — 'Someone is washing the boy'; (c) The most »typical« way of expressing passive voice — Aux + passive verbal adjective — *Dječak je kupan* — 'The boy is being washed'. However, generally the passive voice could be rarely found in early child language if the target language is Croatian.

French

Grammatical categories of the French verb are person (1st, 2nd, 3rd), number (sg, pl), tense, mood and voice. However, in the spoken language, depending on the inflectional class, these categories may not be expressed by suffixes, and verbal forms may be distinguished only by proclitic person markers

(*je, tu, il, elle, ils, elles, on parle* /parl/ 'I, you, he, she, they, we speak') and by auxiliaries (e. g., compound past = *avoir* 'have' / *être* 'be' + PP: *a parlé* /*a parle*/ 'has spoken', compound future = *aller* 'go' + Inf: *va parler* 'will speak'). In other words, in the productive macroclass and in some unproductive micro-classes and paradigms, the 2pl is often the only form having a verb suffix (e. g. *parl-ez*).

Within the category tense, in addition to 4 compound forms (compound past, compound future, pluperfect, past future), spoken French has two synthetic forms: imperfect (*parl-ais*)² and simple future (*parl(e)-ra*), whereas the simple past (*parl-a*) is used only in fairy tales.

French distinguishes four moods (indicative, imperative, conditional and subjunctive). There is no category of aspect encoded separately from tense.

(Austrian) German

German verbs encode the grammatical categories of person, number, tense, mood and voice. There exists no grammatical verbal category of aspect in German.

Person (1st, 2nd, 3rd) and number (sg, pl) are expressed fusionally by verbal suffixes. Within the category tense, spoken Austrian German distinguishes between present, future, perfect, and pluperfect. In contrast to Northern German varieties, the synthetic preterite is unproductive in spoken Austrian German (except for the verb *sein* 'to be'). The present is formed synthetically. Perfect, pluperfect and future tense are expressed by periphrastic constructions, i. e. by combination of Aux (*haben* 'to have', *sein* 'to be') + PP (e. g. *er ist gegangen* 'he went / has gone') and Aux (*werden* 'to become') + INF (e. g. *er wird gehen* 'he will go') respectively. Within the category mood, spoken Austrian German distinguishes between indicative, imperative and conditional. Passive voice is expressed analytically by the construction Aux (*werden* 'to become') + PP.

3. Target children and methods

Croatian

We have analysed the language of the girl Marina, who lives in Zagreb, in an urban environment (Kovačević, Andel 1999a & 1999b). The modern variant of Zagreb Kajkavian dialect, which differs both from the standard Croatian and standard Kajkavian dialect of Croatian (Šojat 1979), is spoken in the family and acquired by the child. With numerous two-word utterances produced already at the age of 1;10, Marina is an early talker. Her acquisition style may be characterised as segmental (Peters & Menn 1993). We analysed 8 spontaneous speech samples, recorded usually while the girl was playing with her mother or while they were commenting on picture books. The analysed 8 transcripts were chosen from a larger corpus of 42 transcripts, each of them 40 —

2 Which corresponds to imperfective aspect opposed to perfective aspect of compound past.

45 minutes long.³ So far, only the first phase of data processing (transcription) could have been done using the CLAN tools for language analysis (MacWhinney 1995). Therefore, for this purpose, the data have been analysed in an MS Access database. In the analysed period the child was between 1;10 and 2;2 years old, but her onset of speech is to be dated earlier. According to the theoretical framework of the Project on Pre- and Protomorphology, the present data seem to fall into the child's protomorphological phase.

French

The French data of this study are taken from the corpus of Emma, a single child living in Lausanne (Switzerland). The father speaks the regional variety of French, whereas the French mother uses a variety of French from western France (Poitiers). Differences between these varieties are limited to some phonetic and lexical features.

Emma has been recorded twice a month by her father and mother in free play situations⁴, often while having a bath, from 1;4.13 to 3;0 (39 recordings of about 30 minutes each). For this study we have considered speech samples until 2;6, i. e. 33 recording-sessions.

With a MLU of 2.4 already at 1;7 and of 3.3 at 1;10, Emma can be considered as an early talker — her onset of speech is at about 1;2. The beginning of the protomorphological phase can be dated at around 1;8. Modularized morphology starts at about 2;1.

Emma is rather a segmental child (cf. Peters & Menn 1993) but seems to favour also the imitative strategy (cf. several examples of rote-learned sequences in which she seems to play with her words and transform them in successive steps).

Transcription and coding have been done according to the norms of CHILDES (MacWhinney 1995). Quantitative analyses have been done with the help of the CLAN programs⁵ of the CHILDES system.

3 We would like to express our gratefulness to Sandra Jončić, mother of the child, for collecting the data and to Blaženka Brozović for having patience transcribing them, within the project 'Psycholinguistic aspects of acquisition of Croatian' (head M. Ljubešić). Data analysis was done by Maja Anđel within the project 'Language processing in Croatian: Psycholinguistic and neurolinguistic approach' (head M. Kovačević). Until its closure in 1996, the project 'Psycholinguistic aspects of acquisition of Croatian' had been supported by the Croatian Ministry of Science and Technology, as it is the project 'Language Processing in Croatian: Psycholinguistic and neurolinguistic approach' today.

4 M. Kilani-Schoch is grateful to Emma's parents for their collaboration in collecting the data and checking the transcriptions.

5 Thanks are due to Marc Xicoira and Martin Forst for technical help and to the University of Lausanne for financial support.

(Austrian) German

The Austrian child, the girl Katharina, is the second of three children of an Austrian couple living in Vienna. She was audio-recorded in free play situations (mostly in interaction with the mother) from the age of 1;6 to 3;0, yielding 34 spontaneous speech sessions of about 30 minutes each. In comparison with other German speaking children and with Emma and very probably Marina, Katharina's onset of speech is rather late, namely at around 1;8 — but she advances rapidly later on. Katharina enters the protomorphological stage at about 2;3, the onset of modularised morphology can be dated around 2;9. In terms of Peters and Menn (1993: 745), her approach to language can be characterised as 'formulaic': i. e. she initially focuses on multisyllabic chunks of speech rather than on single words. Nursery rhymes and songs play an important role in Katharina's early acquisition phase (Müller 1997: 61ff.). The data were transcribed and morphologically coded according to CHILDES⁶; for quantitative analyses the CLAN programs were used.

4. Results

4.1. Verb production

In figures 1a–c, we have distinguished a) verb types (i. e. number of different verb forms per lemma) and b) verb tokens (i. e. number of occurrences for each specific verb form).

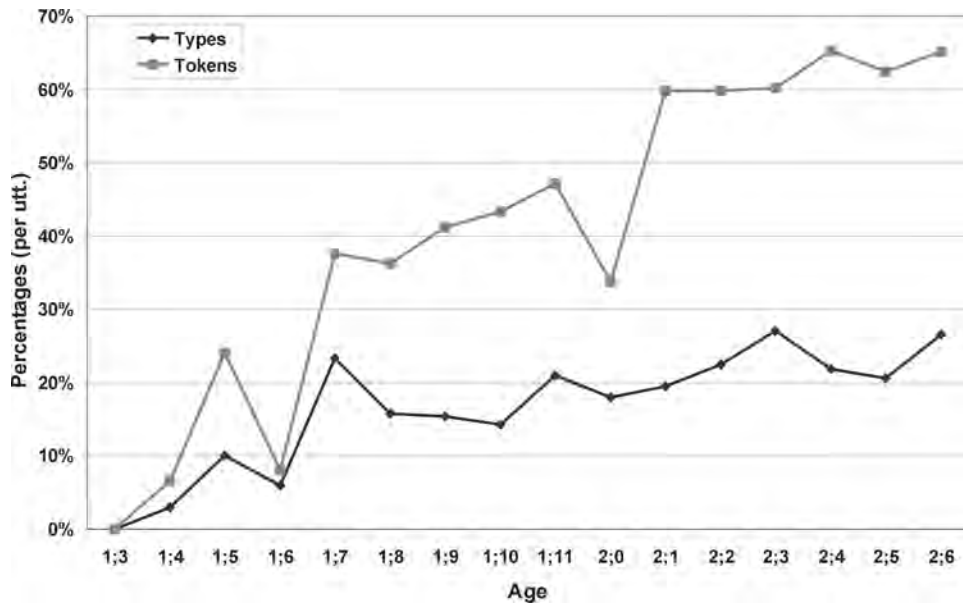
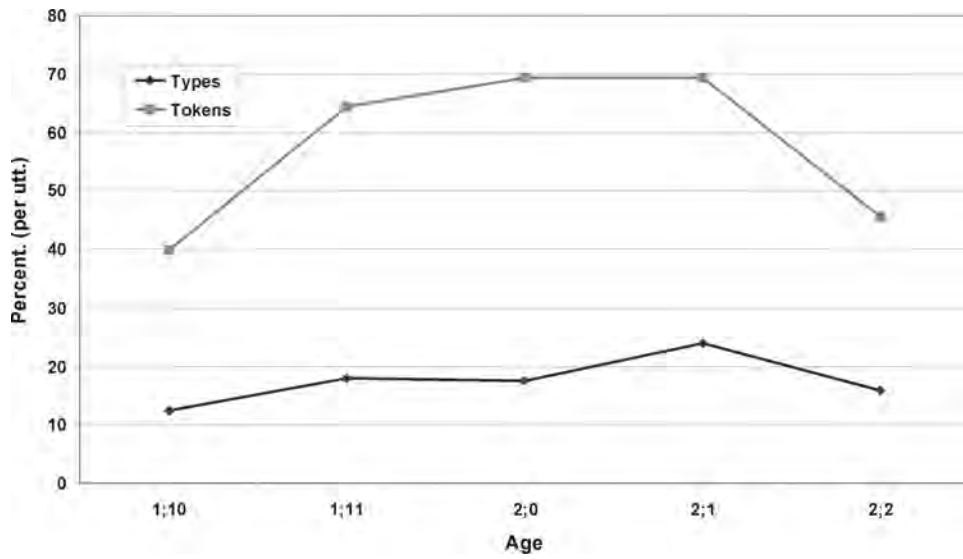
Percentages have been calculated with respect to the total number of analysed child utterances⁷ per month, and thus show the steady increase of verbs.

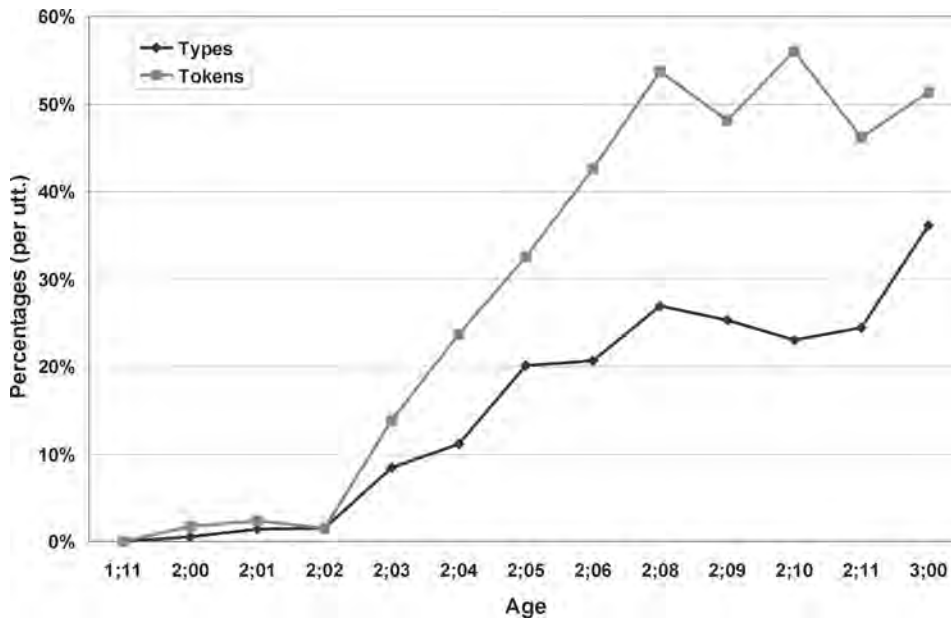
Croatian

At the beginning of our analysis Marina has already been producing 38 verbal types and 121 tokens. At the age of 1;11 the number of tokens increases sharply, and in the two following months slower. Due to a preponderance of deictics, the last recording shows a significant decrease of verbal types and tokens.

6 We would like to thank Katharina's mother for her help in collecting the data. Data transcription was made by Brigitta Müller (and checked by Maria Sedlak) within the project 'Vor- und Frühstadien des Morphologieerwerbs' (P10250SPR), supported by the 'Fonds zur Förderung der wissenschaftlichen Forschung'. Sabine Klampfer was responsible for the automatic morphological coding of the data (using CLAN's MOR utility) and for the creation of the full-form lexicon GER.LEX which was used for this purpose. Thanks are due to Steven Gillis for introduction to MOR-coding.

7 To qualify as an utterance, a production had to include at least one meaningful unit resembling a Croatian, French or German word in form and meaning. Citations (e. g. songs, nursery rhymes) have been excluded from the analysis.





French

Verbs are first (at 1;4) infrequent, but immediately after the first month of recording they show a regular expansion and at 2;1 a sharp increase in number. This is followed by a period of stabilisation until 2;4 where their proportion raises again, less strongly though, and eventually levels up. (Differences of recording length and of situation context are responsible for the decrease in types and tokens at 1;6 and 2;0).

(Austrian) German

With the Austrian girl Katharina (figure 1c) verbs start to emerge at 2;0. From the age of 2;3 onwards a sharp increase of verb production is observed. At 2;8 this increase starts to level out.

Comparative analysis

Verbs emerge earlier with the French than with the Austrian child. One reason is that German verbal meanings are first expressed by isolated verb particles (e. g. *zu* 'closed')⁸; The other reason lies in the interindividual differences between the three investigated children: Marina and Emma are early

8 Unfortunately, due to the lack of transcribed material from earlier stages, it is not possible to date the onset of verbs with the Croatian girl Marina. Informations about her onset of speech and first occurrences are based on parental reports and therefore express only approximative values.

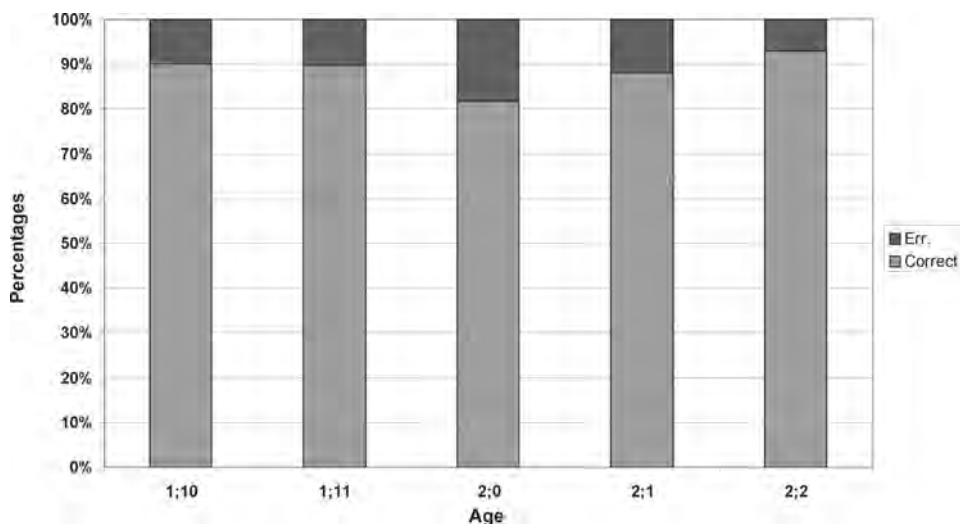
talkers, whereas Katharina is a late beginner. Interestingly, both early talkers show a slower increase of verbs, the late beginner Katharina however progresses rapidly. Furthermore, with Katharina the number of verbal types and tokens increases more regularly than with Marina and Emma. The regression phases observed with Marina and Emma are due to different situational contexts (picture book sessions stimulating more referential and deictic expressions). These variations are most visible within token frequency.

4.2. Errors

In our analysis *correct* means that the produced verbal form is identical with the adult target and appropriate to the pragmatic, semantic and syntactic utterance frame. Therefore, an *error* may mean that the verb is produced in person, number or tense, which is inappropriate to the context; errors in production of compound tenses include the omission of the auxiliary or morphologically incorrectly produced auxiliaries. An error in morphological production of the auxiliary can be explained by the same processes as errors in production of simple verbal forms. Production of the participle is more complex in French and in German⁹ than in Croatian, because of the morphotactic transparency present in the production of Croatian verbal adjective.

Croatian

The results of this analysis show that in the data collected during the first month (child's age of 1;10), there are 9,92% incorrectly produced verbs. This percentage almost doubles in two months and it is 18,3% when the child is 2;0.



⁹ In spite of additional information contained in Croatian verbal adjective (gender), there are few irregularities in its formation (especially in the variant acquired by the observed child), such as found in e. g. German Ablaut.

For our error analysis we have distinguished between two types of errors: a) existing, but non appropriate forms, and b) non-existing forms (Anđel, Kovačević 1999).

The most common error found in our corpus is the use of an existing, but inappropriate verb form (a), mostly the 3sg instead of the 1sg or 2sg, like

*MAR: *ja isti oće čitati*. — 'I the same want-3sg to read' (2;0).

Only two errors in agreement between nominal subject (pl) and predicate (sg) have also been found. However, the most interesting error type is formation of verbal forms consisting of the stem and an inappropriate inflectional suffix, resulting in production of (b) non-existing forms — *hoćem* instead of *hoću* — 'I want'¹⁰ (1;11 and 2;1), **trčiju* instead of *trče* — 'they run' (1;11), **radiju* instead of *rade* — 'they work' (2;2), which are good examples of what might be characterised as overgeneralizations in child language. The produced errors show the child's general preference for the more iconic and transparent suffix *-Vju* (third person plural) of the fully transparent verb class Inf: *ati*>1sg: *am*. Furthermore this verb class is one of the most productive verb classes in Croatian, which is in accordance with the premises articulated in the Project on Pre- and Protomorphology. Namely, it is expected for children to show preference for more productive verbal classes, which should be visible when children form new verbs, mostly the child-specific neologisms, but also in errors they produce. Generally, a class-shift from the unproductive verb classes towards the productive ones is expected. Therefore, Dressler, Dziubańska and Katičić (1996) suggest that, concerning their inflectional productivity, regular Croatian verbs can be divided in 4 macroclasses. Every macroclass (except for the macroclass 4 — Inf: *gledati*>1sg: *gledam* 'to watch') consists of several microclasses. 2 microclasses from the first macroclass are productive (Inf: *kupovati*>1sg: *kupujem* 'to buy'–imperfective and Inf: *darivati*>1sg: *darujem* 'to give a present'), whereas in the macroclasses 2 and 3 this is true only for one microclass [Inf: *šapnuti*>1sg: *šapnem* 'to whisper' (2.) and Inf: *gubiti*>1sg: *gubim* 'to lose' (3.)]. The macroclass 4 is very productive, fully transparent and can not be further divided.

Furthermore it is interesting to note the difference in the acquisition of the auxiliary verbs *htjeti* — 'to want' and *biti* — 'to be'. We have found that the most common type of error in forming the present tense of the verb *htjeti* is making analogies to forms from other paradigms. This results in overgeneralised forms like **hoćem* instead of *hoću* in 1sg, and the substitution of the first person singular by the third person (*Ja isti oće čitati*. (2;0) — 'I want to read the same'). Analogies occur only with *htjeti* and not with *biti*, probably because the present forms of the verb *biti* are too irregular and opaque (suppletion).

10 Formation of the 1sg present of the verbs *htjeti* 'want' and *moći* 'can' differs from all other verbs, since it does not take the personal suffix *-m* but forms its 1sg by replacing the thematic vowel *e* with *u*. A comparable analogical replacement occurs in the 3pl, where the rather opaque substitution of the thematic vowel by the pl suffix *-e* or *-u* (as in 3sg *trči*>3pl *trče* and 3sg *piše*>3pl *pišu*) is replaced by transparent addition of pl suffix *-ju* to the thematic vowels *-e* and *-i*, thus *trčiju* and *pišeju*, in analogy to other classes, cf. Inf. *gledati*>3pl *gledaju*.

French

Overall Emma shows a small proportion of errors. Their rate decreases already at the beginning of protomorphology (1;8) and more drastically at the transition from protomorphology to modularized morphology (2;1).

Among the type a) of errors (existing, but non appropriate forms), the most common ones found in Emma's corpus are root infinitives. Two types of root infinitives may be distinguished: those resulting from omission of the auxiliary or modal verb, e. g. 0aux/0mod + Inf (root infinitives): age 1;11 *là Papa gicler* (= *là Papa va gicler*) 'squirt with water' and those — less frequent — where a root infinitive occurs instead of a finite form, e. g. age 1;8 *faire bobo là* (= *ça fait bobo là*) 'is hurting there'.

A few agreement errors occur with three highly frequent types of verb, e. g., as to number agreement: 3sg instead of 3pl, age 1;10 *il est /ɛ/* (= *sont /sɔ̃/*) *pas là les tillons* (= *crayons*) 'the pencils aren't there', age 2;1 *il est* (= *sont*) *gentil les chevaux* 'the horses are nice'; as to person agreement, 3sg is used instead of 1sg: age 2;3 *je l' a passé* (= *je l' ai /e/ passé*) 'I have passed it', age 2;5 *moi je vas* (*moi je vais /vɛ/*) 'I am going'. A greater number of data would be necessary for a reliable account of number agreement errors due to limited contexts of marked agreement in the spoken language (cf. 2).

Non existing forms (type b) of errors) correspond to class shifts and category shifts.

Class shifts are either overgeneralizations of 1. macroclass Inf., e. g. age 1;10 Inf *sorter* for *sortir* 'go out', age 2;2 Inf. *metter* (= *mettre*) 'put' or overgeneralizations within 2. macroclass, e. g. 2;4 Inf. *tiendre* /tjãdr/ (= *tenir* /tɛnir/, 3sg *tient* /tjɛ̃/) 'hold' (after 3sg *éteint* /etɛ̃/, Inf. *éteindre* 'turn off').

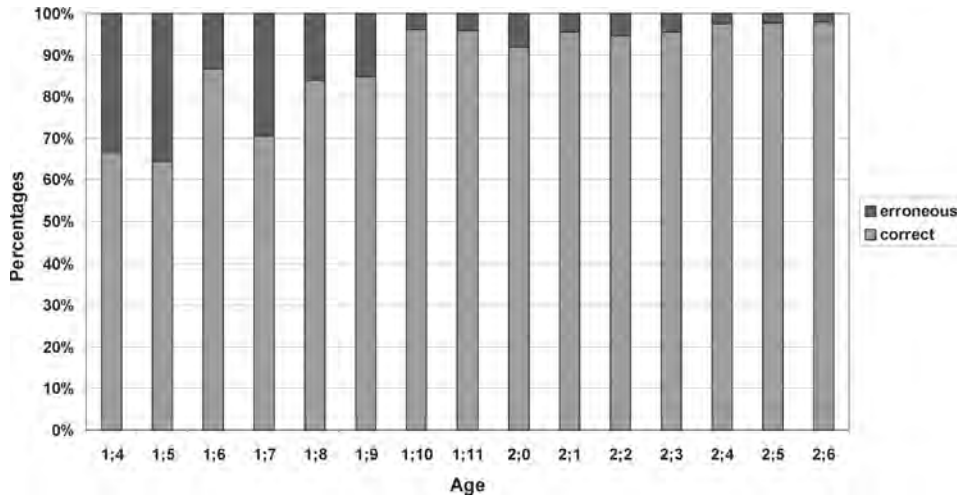
Category shifts display overgeneralizations of Present Ind., e. g. age 2;1 Comp. Past *as morde* /mɔrd/¹¹ (= *as mordu* /mɔrdy/) 'has bitten', 2;2 Comp. Past *sont descendent* /desãd/¹² (= *sont descendus* /desãdy/) 'went down'¹³.

Emma's errors exaggerate the tendency of French to strongly limit the number of distinct forms of a verb paradigm. Agreement errors extend to the 1sg and the 3pl the semantically less marked 3sg; class shifts may be analysed as if reducing verb inflection of 2. macroclass to an alternation between simple form and amplified form with final consonant. The example of class shift *tiendre* (= *tenir*) goes with this analysis.

11 Cf. 3pl *mordent* /mɔrd/.

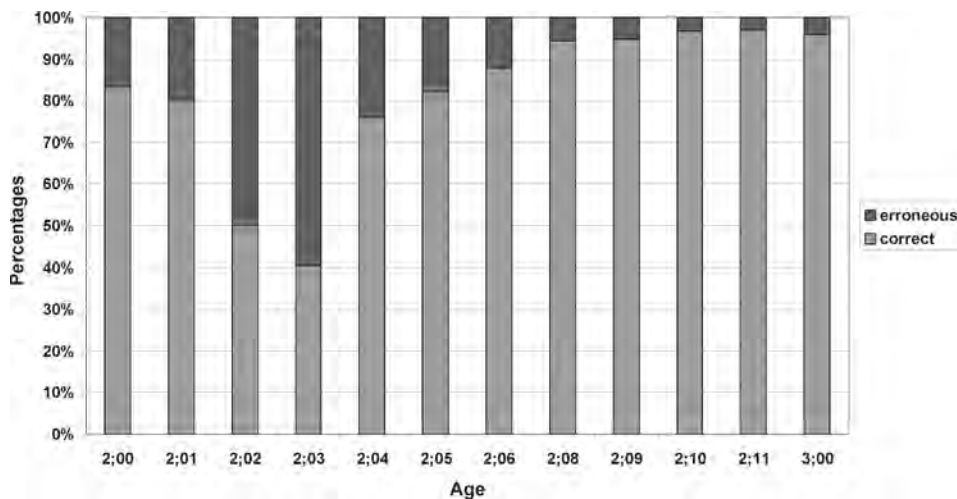
12 Cf. 3pl *descendent* /desãd/.

13 Notice that these examples could be seen as violations of basic combinatorial rules, unusual in child language.



(Austrian) German

As can be seen in figure 2c, the development of verb forms with the Austrian girl Katharina shows clearly a 'U-shaped learning curve' which can be said to reflect the girl's transition from a rote-learning phase (premorphology) to a phase with the first creative but still incorrect use of rules (protomorphology) to a final phase characterised by gradual extension towards the target system (modularised morphology) (cf. Dressler & Karpf 1995).



As to the use of existing, but non appropriate forms (error type a), the most common errors found in the Austrian data consist of the use of 'root infinitives' (possibly resulting from omission of an auxiliary or modal verb), e. g. 2;3 *Papi (sch)lafen* (= Papi tut schlafen / Papi schläft) 'daddy is sleeping' on the one hand, and of the use of 1sg Pres. Ind. forms (or pure stem forms?) instead of other personal forms, e. g. *pass mir* (= passt) 'fits me' 2;8 *möcht du?* (möchtest du?) 'do you want?' on the other hand. Such as in Croatian and French, errors in number agreement are rare in Austrian data. They are reduced to a few occurrences of 3sg instead of 3pl forms (e. g. 2;6 *da is(t) Blumen drauf* (= da sind Blumen drauf) 'there are flowers on it').

As to the use of non-existing forms (error type b), the most interesting error observed with Katharina consists of shifts from one verbal class to another. Thus, for example, Katharina's overgeneralizations of PPs are mainly characterized by a class shift from unproductive verb classes towards the only productive verb class (type *spielen* 'to play'), which, at the same time, is also the most transparent and most frequent one (in terms of lemma frequency). Interestingly, overgeneralizations are observed only with verb classes which do not take Ablaut in the PP (ex. *gewaschen* > **gewascht* 'washed', *gefressen* > **gefressst* 'eaten', *gegeben* > **gegebt* 'given'). Thus, for Katharina, minimal morphotactic transparency (identity of the root) might be a condition for analogy. The same phenomenon has been observed by Lindner (1998) for German children.

Comparative analysis

The obtained results permit the conclusion that the existence of irregular, morphotactically opaque verbal forms in all three languages confuse children, who then try to regularise them in their own way, creating some forms which don't exist in the target language.

The first, and the most frequent kind of errors consists in a clear tendency to overgeneralise opaque forms towards more transparent and also more productive verb classes of the respective language. In Croatian it is the productive macroclass 4 (type *gledati* 'to watch'), in German the only productive class (type *spielen* 'to play'), and in French the macroclass 1 (type *parler* 'to speak') (but in French, also overgeneralizations within the macroclass 2 occur).

The second group of errors occurring with all three children is the use of existing verbal forms in inappropriate contexts. This includes the tendency of using root infinitives observed in the French and the German data, which has not been found in Croatian data. This shows a clear difference in strategies between the Austrian and French child on the one side, and the Croatian on the other. The study by Katičić (1997) confirms that root infinitives are rather rare with Croatian children in general. One possible explanation of this could

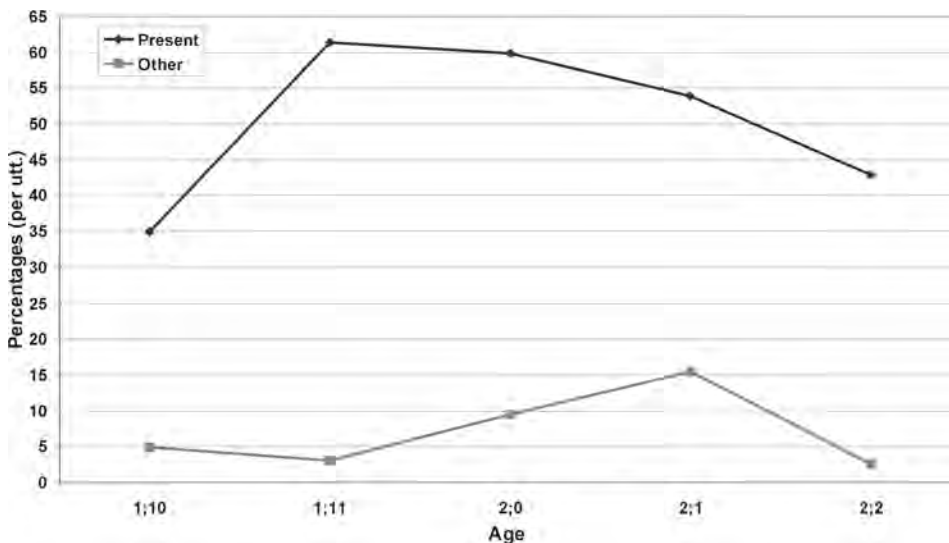
be the stronger markedness of the infinitive in Croatian, in comparison to some present tense forms, especially the 3sg.

The third interesting phenomenon observed in our data is the occurrence of errors in number agreement, i. e. replacement of morphologically marked plural by morphologically less marked singular forms (example from Croatian: *radim*-1sg vs. *radimo*-1pl), but they are rather rare in all three languages.

4.3. Tense

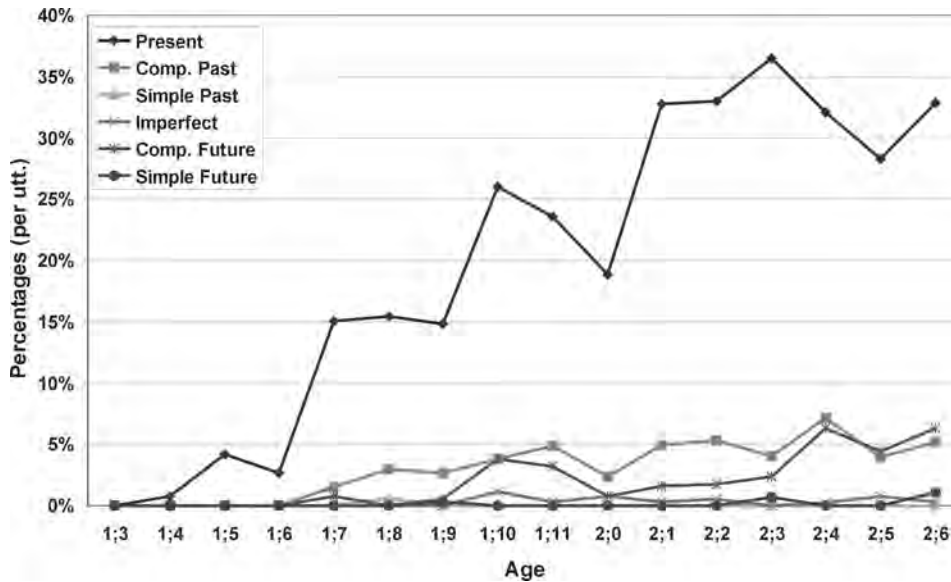
Croatian

Although the results of the analysis show that Marina gradually starts to use more and more complex forms and a greater variety of verbal tenses, present tense still dominates in her language. The biggest number of perfect forms occurs at 2;1 although no gradual increase in other tenses, for instance in future, has been observed.



French

Present tense is the only tense in the first three months of recording (1;4 — 1;6). From 1;7 onwards several tenses are instantiated, even some with low frequency in the adult language, e. g. simple future, imperfect and simple past, but the number of types and tokens is limited. There seems to be a decrease of present and an increase of other forms between 2;4 and 2;6 (also at 1;9 — 1;10 however!).



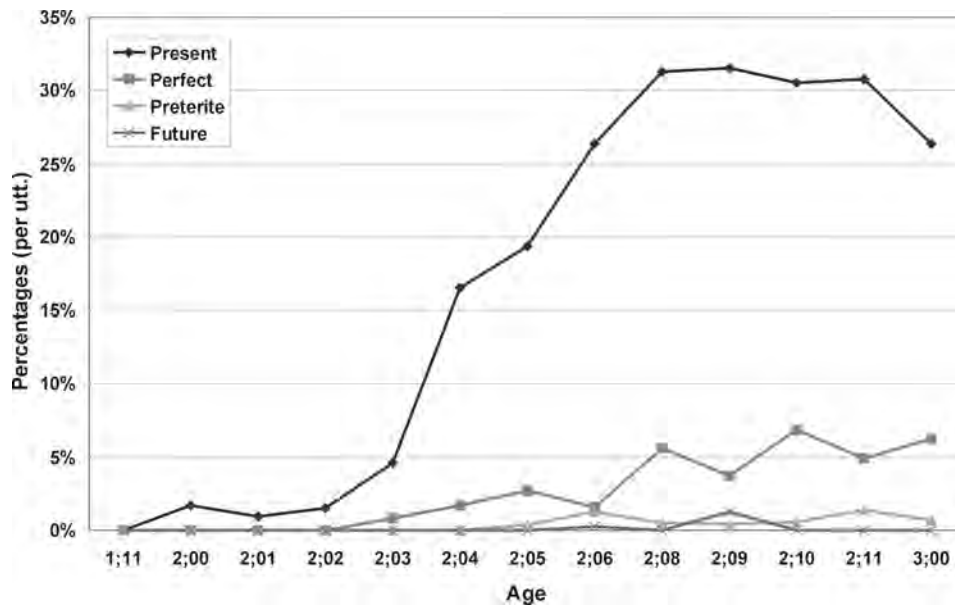
(Austrian) German

The predominance of verb forms in the present tense observed in Croatian and French holds also for the Austrian data analysed here (see figure 3c). With the beginning of protomorphology (at 2;3) present tense tokens show a sharp increase. At the same age, first examples of perfect tense have been found. Whereas the increase of present tense starts to level out at 2;8 (near the end of protomorphology) perfect tense gradually increases until the end of recordings. Preterite and future tense forms emerge late and have low token frequency.

Comparison

A clear predominance of present tense forms has been observed in all three languages. The only difference found is more frequent use of analytic future in French (*futur proche*, i. e. future tense directly related to *hic et nunc*). This may be related with the fact that in spoken French there is less tendency to express close future by present tense forms than in Croatian and German.

However, in Croatian there is an interesting shift in using present tense instead of future in general (both future II and future I), as well as in usage of future II instead of future I in Zagreb variety of Kajkavian dialect. This shifts lead to the more frequent production of the present tense as it has been

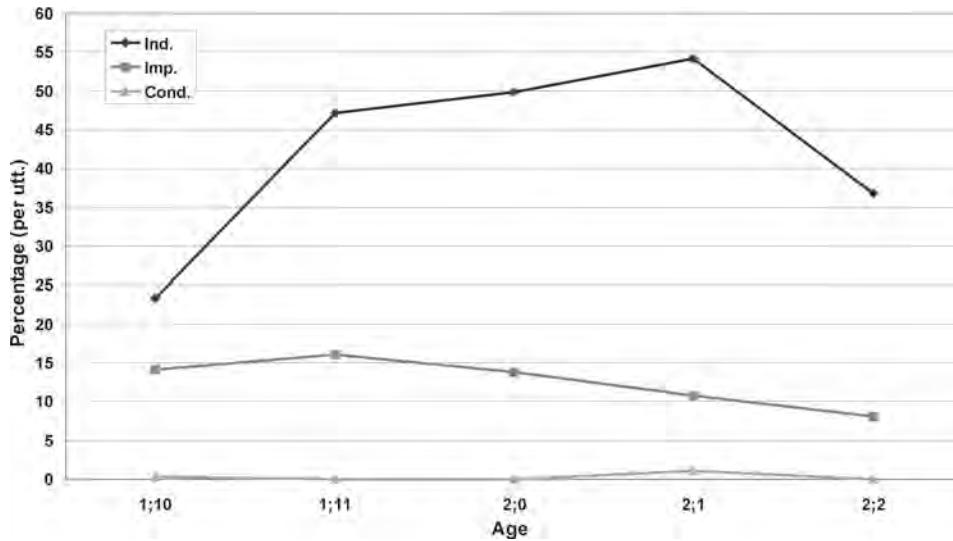


mentioned above, but also to earlier appearance of future II in child language, which is actually marked with higher level of complexity. As a result of input language, which is always almost inevitably a mixture of dialect and of standard, simultaneously with the future II, a child can acquire the future I forms as well. Nevertheless, this higher level of diversity in acquiring forms to express future may be specific only for children acquiring one Croatian dialect (Kajkavian), while in other dialects we could expect to observe more general simplification in expressing future by using present tense forms.

4.4. Mood

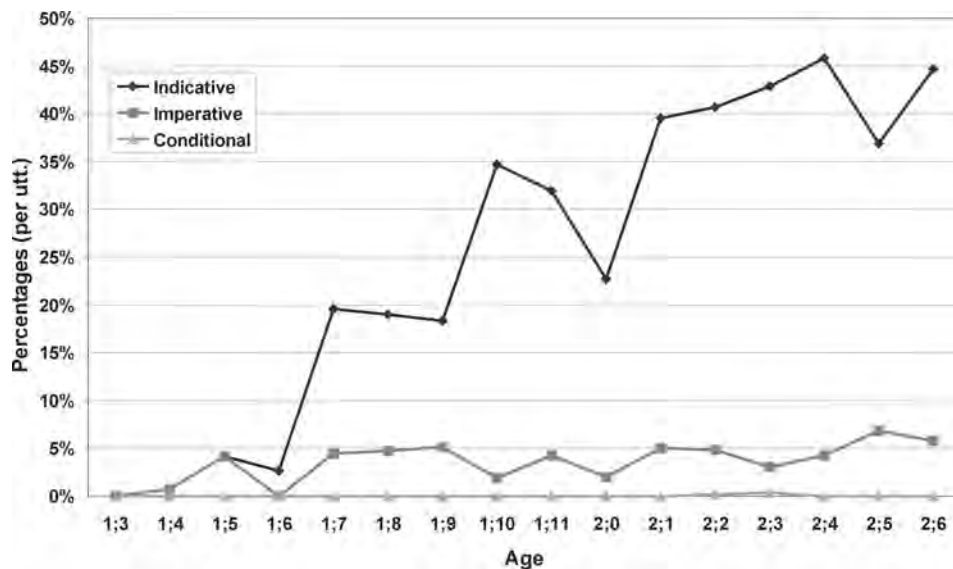
Croatian

As expected, we observe a predominance of the indicative in the child's speech. The imperative forms are significant only when expressed in tokens because their use is limited to few verb types. In the analysed period we find only six tokens in conditional mood (produced correctly). Figure 4a shows that in the beginning there are more imperative forms but their percentage diminishes gradually.



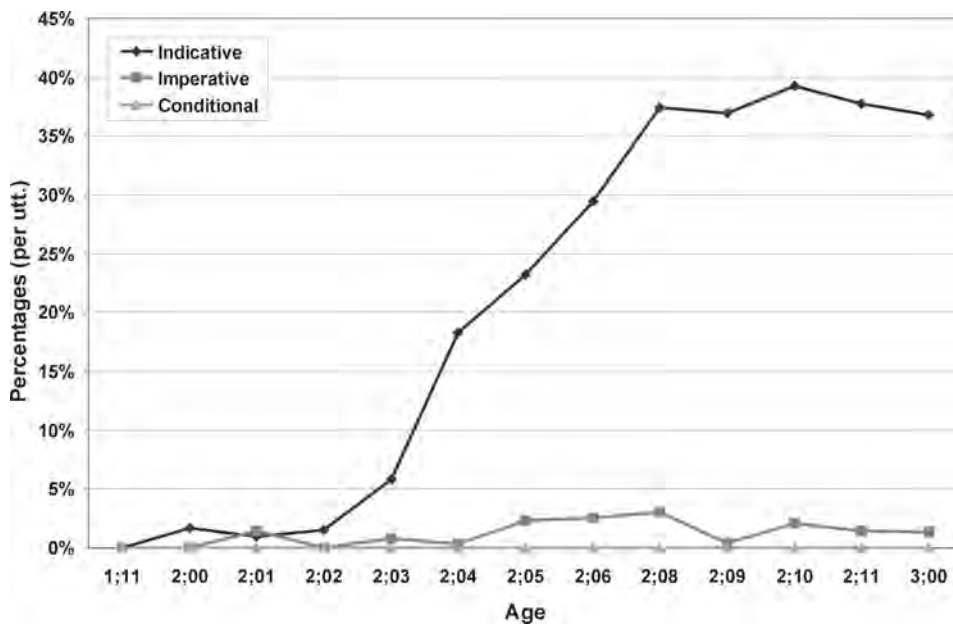
French

Indicative forms are predominating in French as in the two other languages. The proportion of imperatives is higher between 1;5 and 1;9 than later on. However there is variation from one recording-session to the next without any regular move. Conditional forms are limited to two instances.



(Austrian) German

Also with the Austrian girl Katharina a clear predominance of verb forms in the indicative is observed (see figure 4c). Imperatives emerge early (at 2;1), but are far less frequent than indicatives. Conditional forms did not occur at all in Katharina's data.

*Comparison*

As expected, in all three languages we can observe the predominance of indicative forms. They are followed by imperatives, which are still far less frequent. Very few or no conditional forms have been found, despite their synthetic forms in French and analytic in Croatian and German.

5. Conclusion

The main intention of this paper was to sketch a comparison of verb acquisition in three different languages. We have compared the acquisition processes in three children of approximately the same age. Despite the small sample of this analysis, the similarities that we have found here may be understood as pointing to general characteristics shared by the acquisition process in the three languages. It is clear that a larger quantity of data and a larger number of investigated children would give a more reliable picture of common tenden-

cies in the acquisition process and we hope to be able to perform some more comprehensive analyses in future.

All three children have showed an increase in verb production during the protomorphological phase (4.1.). Such increase may be a prerequisite for the identification of the role and importance of morphology by the child. Clearly the structures of the adult target language explain evident differences in acquisition. For example, the Austrian child produces first stressed verb particles (separable verb prefixes) instead of verbs, i. e. a category which exists in German but neither in Croatian nor in French. The »errors« noted on 4.2. (which may partially reflect intermediary systems constructed by each child) may be, at least tentatively, explained in terms of four naturalness criteria:

1. Morphotactically less transparent forms tend to be substituted by more transparent forms (rather than vice-versa)
2. More productive verb classes are preferred
3. Marked forms are substituted by corresponding less marked forms. This explains, for example, why the Croatian child substitutes the more marked 1sg with the less marked 3sg, whereas the Austrian child substitutes the more marked 2sg and 3sg with the 1sg form which is less marked in colloquial oral usage.
4. The frequency of root infinitives in early French and German, as opposed to their rareness in Croatian, can be explained by Dressler's homophony hypothesis (cf. Kilani-Schoch & Dressler 1999, 2000; Klampfer et al. 2000):
 - a) French and German infinitive forms are homophonous with other forms of the verb paradigm (French past participle and 2pl indicative on the only productive and most frequent verb class; German 1pl and 3pl indicative), whereas the Croatian infinitive is not homophonous with any other verb form;
 - b) At very early stages, children tend to prefer forms which they can use in as many syntactic constructions as possible.

Also in 4.3. and 4.4. we found an acquisitional precedence of less marked categories: present among tenses and indicative and imperative among moods. The early emergence of the French analytic future (in contrast to the Croatian and German correspondents) may be derived from the fact that both Croatian and German use the *praesens pro futuro* much more often than French.

According to the predictions of our framework, after selecting means of expression appropriate to the communicative situation, children tend to pick what is more transparent and regular, but also what is more informative and more frequent in the target language. To be fully clarified, these statements would need more profound elaboration than has been provided in this paper. However, we believe that we have obtained sufficient level of certainty to put our conclusions into that direction. When talking about transparency and regularity, as well as frequency and informativity of linguistic forms and categories, we are actually trying to predict the order of their appearance in child language. Therefore, for instance, if something is more frequent in language,

it will appear earlier than less frequent forms (present vs. past); if something is more regular and transparent, it will be acquired first and could result in a phenomenon called overgeneralization (particular class of verbs). The nature of child errors indicates that after a period of simply accepting everything their surroundings offer on language material, they start to analyse and thus obtain the ability to use the language actively and creatively.

We would like to stress that every cross-linguistic analysis of this sort faces certain obstacles. Our analysis has been constrained by features that are present in forms within verbal systems of all three languages. There is no absolute overlapping in emergence of morphological forms and the linguistic role they carry within a particular language. Namely, if we observe two different languages, it can be frequently noticed that one feature of particular linguistic category, which occurs early in child language, does not appear in another observed language, or it is expressed by other linguistic means. For instance, while the Croatian verbal system can be, and it is separately marked for tense and aspect, French does not differentiate them (tense marking also carries the information on aspect). Therefore, when analysing child language, different features emerge in their language and at different time points, which makes cross-linguistic comparisons even more challenging.

Literature

- Andel, M., Kovačević, M. 1999. Noun and verb acquisition in native Croatian speaking child — single case study. Presented at the Early Language and Communication Development Symposium, Dubrovnik, 1.–10. listopada 1999.
- Barić, Lončarić, Malić, Pavešić, Peti, Zečević, Znika. 1997. Hrvatska gramatika, Zagreb: Školska knjiga.
- Blaži, D., Vancaš, M., Kovačević, M. 1999. Glagolska i imenska morfologija u ranom usvajanju hrvatskoga, Drugi hrvatski slavistički kongres, Osijek, 14.–18. rujna 1999., str. 82–83.
- Dressler, W. U., Mayerthaler, W., Panagl, O. and Wurzel, W. U. 1987. Leitmotifs in Natural Morphology. Amsterdam: Benjamins.
- Dressler, Wolfgang U., Dziubalska, K. & Katičić, A. 1996. A Contrastive Analysis of Verbal Inflection Classes in Polish and Croatian. Zagreb: Suvremena lingvistika 41–42. 127–138.
- Dressler, Wolfgang U. & Annemarie Karpf. 1995. The theoretical relevance of pre- and protomorphology in language acquisition. Yearbook of Morphology 1995; 99–122.
- Dressler, Wolfgang U. 1997. ed. *Studies in Pre- and Protomorphology*. Wien: Verlag der Österreich. Akademie der Wissenschaften.
- Jelaska, Z., Kovačević, M. 1999. Glagoli protiv imenica u ranome usvajanju hrvatskoga jezika, Drugi hrvatski slavistički kongres, Osijek, 14.–18. rujna 1999., 105–106.
- Karmiloff-Smith, A. 1992. Beyond Modularity: a developmental perspective on cognitive science. Cambridge/Mass: MIT Press.
- Karpf, A. 1990. Selbstorganisationsprozesse in der sprachlichen Ontogenese: Erst- und Fremdsprache(n). Tübingen: Narr.
- Karpf, A. 1991. Universal Grammar needs organization, *Folia Linguistica* 25, 339–360.
- Karpf, A. 1994. Chaos and order in morphology (neuron watching included). In L. Tonelli and W. Dressler (eds.), *Natural Morphology — Perspectives for the Nineties*. Padova: Unipress, 7–20.

- Katičić, A. 1997. Zum Erstspracherwerb des Kroatischen: morphologische und syntaktische Aspekte beim Erwerb des Verbalsystems. Unpublished MA-thesis, University of Vienna.
- Katičić, A. 1999. Usvajanje hrvatskog glagolskoga sustava, Drugi hrvatski slavistički kongres, Osijek, 14.–18. rujna 1999., str. 107.
- Kilani–Schoch, M. 1988. Introduction à la morphologie naturelle. Bern: Lang.
- Kilani–Schoch, M. & Dressler, W. 1999. Filler+Infinitive and Pre- & Protomorphology demarcation in a French acquisition corpus. *Journal of Psycholinguistic Research*.
- Kilani–Schoch, M. & Dressler, W. 2000. The emergence of verb paradigms in two French corpora as an illustration of general problems of pre- and protomorphology. Ms.
- Klampfner, S., Maillachon, I., Bassano, D., Dressler, W. 2000. On early acquisition of verb inflection in Austrian German and French: the case of person and number marking. *Wiener linguistische Gazette* 64–65. 1–29.
- Kovačević, M., Anđel, M. 1999a. Jesu li leksički i gramatički razvoj međusobno uskladeni? Savjetovanje Hrvatskog društva za primijenjenu lingvistiku, Opatija, 7.–8. svibnja 1999.
- Kovačević, M., Anđel, M. 1999b. Early verbs in acquisition of Croatian. 27. österreichische Linguistiktagung, Beč, 23. — 26. listopada 1999.
- Kovačević, M., Jelaska, Z. & Brozović, B. 1998. Comparing lexical and grammatical development in morphologically different languages. Aksu Koc, A. et al. (eds). *Perspectives on language acquisition*. Istanbul: Bogazici Univ. Printhouse. 363–383.
- Lindner, Katrin. 1998. Overgeneralizations revisited: the case of German past participles. In: R. Fabri, A. Ortmann & T. Parodi. ed. *Models of inflection*. Tübingen: Niemeyer;
- MacWhinney, Brian. 1995. The CHILDES Project: tools for analyzing talk. Hillsdale: Erlbaum.
- Müller, Brigitta. 1997. The acquisition of early morphology: a case study. In: Dressler ed.; 63–74
- Peters, Ann. M. & Lise Menn. 1993. False starts and filler syllables: ways to learn grammatical morphemes. *Language* 69/4; 742–777.
- Šojat, A. 1979. O zagrebačkom kajkavskom govoru. *Rasprave Zavoda za jezik Instituta za filologiju i folkloristiku (RZJ IFF)* 4–5; 125–134.
- Težak, S. & Babić, S. 1992. Gramatika hrvatskoga jezika. Zagreb: Školska knjiga

Usvajanje glagola u hrvatskom, francuskom i austrijskom njemačkom — nacrt poredbene analize

Istraživanja jezičnog usvajanja u djece, tj. usporedbe usvajanja u tipološki različitim jezicima, važna su za rasvjetljavanje pojma univerzalnih lingvističkih obilježja. Cilj je ovog rada usporediti usvajanje glagolske morfologije u tri jezika koji, iako iz iste tipološke skupine, pripadaju trima različitim granama indoeuropskih jezika, zatim, usporediti dječje glagolske sustave u procesu razvoja, te odrediti redosljed pojavljivanja glagolskih oblika u pojedinim jezicima. Nadalje, u radu se raspravljaju dobiveni podaci o pravilnostima uočenim u sva tri jezika. Analiza procesa nastajanja glagolskog sustava u svakom od njih temelji se na promatranju glagolskih vremena i načina. Analiza pogrešaka omogućava nam dublji uvid u aktivnu ulogu koju dijete preuzima u određenom trenutku svojega jezičnog razvoja. Namjera je ovog rada upozoriti na relevantne aspekte jezičnog sustava u nastajanju zajedničke svima trima jezicima, poštujući istovremeno one segmente koji zahtijevaju osobitu pozornost zbog ograničenja što ih nameće jezična različitost.

Key words: language acquisition, verbal morphology, language universals, Croatian, French, Austrian German

Ključne riječi: usvajanje jezika, glagolska morfologija, jezične univerzalije, hrvatski jezik, francuski jezik, austrijski njemački jezik