TEMPORAL DEIXIS IN EARLY CHILD ROMANIAN

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Abstract: This paper investigates the contrastive use of tense-aspect inflections in early child Romanian. It focuses on the use of the *prezent*, *perfect compus* and the periphrastic future morphologies. It finds evidence of the ability to inflect a significant number of the verbs in all the tenses mentioned below the age of 3;0. Additionally, by analysing the context of occurrence of these child predicates, it shows that a basic system of temporal deixis becomes operative before the above-mentioned age. Consequently, the evidence presented by the paper runs against the claims of the Aspect First Hypothesis.

Keywords: tense, aspect, morphology, deixis, acquisition

1. Introduction

The early tense-aspect inflectional morphology has been the focus of intensive study. Two research trends are more prominent. One emphasises the fact that, cross-linguistically, inflectional morphology is distributed function of the situation aspect of the predicate. Imperfective or progressive inflections are associated to atelic predicates and perfective or past inflections are associated to telic predicates. The fact that tense-aspect inflections are restricted to certain situation aspect classes and not used for all situation aspect classes alike led to the hypothesis that such morphemes play a different role in child language than they do in adult language. According to the Aspect First Hypothesis, early inflections do not encode temporal deixis, but the situation aspect of the predicate.

The competing hypothesis is that tense-aspect inflections play the same role in child language as they do in the adult language. They are markers of temporal deixis, i.e. the temporal relation between the event and the *now* of the speech event. Children's system of temporal deixis is nevertheless assumed to be less developed than the adult system. This hypothesis predicts that children are aware of basic tense contrasts, and can produce tense forms contrastively very early on.

The present paper investigates the acquisition of three Romanian tense forms the *prezent*, *perfect compus* and the periphrastic future. It shows that the contrastive use of tense morphology emerges from the onset of language acquisition. In relation to the *prezent*, it explores the use of this form in early Romanian, and argues that the child is able to access not only the default imperfective reading, but also habitual, generic and modal readings. In relation to the *perfect compus*, it shows that the predicates inflected for this tense designate both very recent events with a clear resultative component and events in the remote past as well. In relation to the periphrastic future it argues that Romanian children are able to use it as a marker of posteriority to speech time.

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Overall, the paper presents evidence for the presence of a basic system of temporal deixis in child Romanian, which rules out the view that tense forms are markers of situation aspect.

2. The Romanian tense-aspect system

Romanian has both analytical and synthetic tenses for the indicative mood. The synthetic tenses are the *prezent* (the present), the *perfect simplu* (the simple perfect), the *imperfect* (the imperfective past), and the *mai-mult-ca-perfect* (the pluperfect). There is also an analytic perfect, the *perfect compus* (the compound perfect), which comprises the auxiliary *a avea* 'have' in its phonologically reduced form (*am/ai/a/am/ați/au*) and the past participle. The future is formed periphrastically. The future used in the formal register is formed with an auxiliary (*voi/vei/va/vom/veți/vor*) and the infinitive: *vor pleca* 'will leave'. The colloquial future comprises the morpheme *o* or the auxiliary *a avea* and a subjunctive structure: *o să plec/am să plec* 'I will leave').

The *prezent* has a default imperfective reading (1a) but may acquire habitual (1b), generic (1c) and modal interpretations (1d). It is very frequently used with a future interpretation instead of the syntactically more complex periphrastic future (1e).

(1)   a.   Vine   maşina.
              comes car-the
              'The car is coming.'
       b.   Câinele meu muşcă.
              dog-the my   bites
              'My dog bites.'
       c.   Păsările   zboară.
              birds-the fly
              'Birds fly.'
       d.   Acum pleci!
              now   leave
              'I want you to go now.'
       e.   Mâine   plec la Bucureşti.
              tomorrow leave at Bucharest
              'I am leaving to Bucharest tomorrow.'

The Romanian perfective past *perfectul simplu* (simple perfect) is infrequently used. It has been replaced almost entirely by the analytic perfect – the *perfect compus* (compound perfect). This tense originated as a perfect, but it has enriched its semantics and can be used both as a perfect (2a) and a preterite (2b) (Vişan 2006).

(2)   a.   A venit în Bucureşti de   ieri.
              has come in Bucharest since yesterday
              'He has been in Bucharest since yesterday.'

b.   Ieri   ea a plecat mai devreme.
      yesterday she has left   more early
      'Yesterday she left earlier.'

The colloquial future is the future form most frequently used in informal Romanian (GBLR: 257). It expresses predictions about impending events and, as any future, it is inherently modal (GBLR: 257).

(3)   O să aibă   probleme.
       o SĂ have-SUBJ problems
       'He will have problems.'

3. Previous research on the acquisition of tense and aspect

The acquisition of verbal inflection has been a fertile ground for research. Longitudinal and experimental studies demonstrated that the correlation between the (a)telicity of the predicate and the likelihood of appearing with a certain inflectional marker is a crosslinguistic fact in both child and adult languages; (i) child languages: English (Smith 1980, Shirai and Andersen 1995), French (Bronckart and Sinclair 1973), Italian (Antinucci and Miller 1976), Romanian (Buja 2008, Stoicescu 2011b, 2012), Polish (Weist et. al. 1984), Greek (Stephany 1981); (ii) adult languages: Greek (Stephany 1981), English (Shirai and Andersen 1995, Boland 2006), Romanian (Stoicescu 2011c, 2012). These studies document the generalisations in (4).

(4)   a.   Present / progressive / imperfective morphology generally marks atelic predicates.
       b.   Past / perfective morphology generally marks telic predicates.

Although the above generalizations are an established fact, this was used as a basis for diverging conclusions regarding the nature of the early temporal system. One school of thought proposes that children use tense-aspect inflections as markers of (a)telicity and their tense system is defective. This is the Aspect First Hypothesis. Among the supporters of this hypothesis are Antinucci and Miller (1976). They analyse data from Italian-speaking children aged 1;6-2;5. They claim that atelic verbs are never marked for the past tense, only with the present, while change of state verbs are mainly used in the *passato prossimo*. This is due to the fact that "the child lacks an abstract conception of time that would allow him to construct, between any 2 events X and Y the relation Event Y precedes event X" (1976: 184). They conclude that tense morphology encodes aspect in child language.

Smith (1980) and Weist et al. (1984) and Weist et al. (2004) contradict this claim. They show that although the generalisations in (4) are valid for child English, the opposite combinations, i.e. present/progressive telic predicates or past atelics are only less frequent, not completely absent. Smith (1980) points out that, if children were not concerned with placing the event before speech time and the use of past tenses reflected only telicity, then the past tense should never be used to describe atelic events. She

analyses the spontaneous speech of 17 English speaking children and concludes that "all of the children used past tense inflection to report imperfective [atelic] events and perfective [telic] events" (Smith 1980: 270). The utterances in (5) illustrate the use of past tense morphology with atelic predicates.

(5)   a.   Know what the bear seed?   Abe 2;11
        b.   A goose flewed.   Abe 2;6

The past tense forms in (5) are overgeneralizations of the -ed inflection to irregular verbs. This indicates that the past tense formation rule is known by the child and is applied in a principled manner, even to atelic predicates.

Shirai and Andersen (1995) claim that it is difficult to know whether children encode tense or aspect through the inflectional morphology. Their account is based on prototype theory and assumes that "children acquire a linguistic category starting with the prototype of the category, and later expand its application to less prototypical cases" (Shirai and Andersen 1995: 758). The prototype for the past morpheme -ed is the achievement, i.e. predicates that are [+result, +punctual, +telic]. Children will start using this morpheme with achievements and later extend it to accomplishments, activities and states. The prototype for the progressive morpheme -ing is the activity. Children first use -ing with activities, then with accomplishments and achievements, never with states. Children discover the prototypes by analysing the distributional patterns in the input. Thus the correlations found in adult speech should also be found in child speech. Shirai and Andersen (1995) studied speech samples of 3 English-speaking children. The children first applied past tense to achievements, and the progressive to activities and iterative achievements. The correlation between situation aspect and tense inflections became more relaxed as the children got older (Shirai and Andersen 1995: 758). In addition, the adult data also presented a similar pattern.

In their analysis of the child Polish, Weist et al. (1984) and Weist et al. (2004) oppose the Aspect First Hypothesis and the prototype account. They argue that children do encode deictic relations through the inflectional morphology, being able to distinguish between the present, the past and the future. The subjects of Weist et al.'s (1984) study are 6 Polish children (1;7, 1;7, 1;9, 2;2, 2;1, 2;0). Polish has pairs of perfective and imperfective verbs. Weist et al. (1984) find that, once past tense morphology appears in child language, it is attached to imperfective activity predicates, not only to perfective predicates, contra the Aspect First Hypothesis (6).

(6)   Leciał samolot.
        Marta 1;7
        'The plane was flying.'

All the children were able to mark the difference between the imperfective past and the perfective past (7a-b) (Weist et al. 1984:357). Older children even contrasted the imperfective and perfective future (7c).

(7)   a.   wkładała / włożyła   Marta 1;7/1;9
               'was putting in / put in'

b.   robiłam / zrobiła   Paulina 1;9/1;11
      'was doing / did'
c.   będę rysowała / narysuję   Kasia 2;0-2;3
      'will be drawing / will draw'

Moreover, the resultant state requirement for past tense marking was not met in child Polish – non-resultative verbs inflected for the past were present.

     The Polish children also produced future forms, which is proof that they are able to represent deictic relations. Weist et al. (1984) maintain that the future forms express both modality (intentions, commands) and "predicted completion of a present action" (8):

(8)   Uniesie.
      Marta 1;7
      lift-FUT-PERF
      '(She) will lift.'
      [Marta is lifting up a box.]

Weist et al. (1984: 357) conclude that "the varied patterns produced by each child show that neither tense nor aspect morphology can be viewed as redundant information". Aspectual and tense contrasts emerge simultaneously in child Polish.

     In another study, Weist et al. (2004) perform a predicate tracking analysis in several longitudinal corpora of child English and Polish. They argue that Polish children start contrasting tense (past versus future) and grammatical aspect (imperfective versus perfective) around the same age (2;4). However, in child English, tense contrasts emerge earlier than the contrast between the non-progressive past versus the past progressive past (see the table below which gives the average ages of emergence of tense and grammatical aspect contrasts). Children learning English contrasted the past versus the *be going to* future at the average age of 2;11. They were able to contrast the simple and progressive past at 3;6 (Weist et al. 2004: 43).

Table 1 Average ages of emergence of tense and aspect contrasts[1]

Language	Tense	Aspect
English	2;11	3;6
Polish	2;3	2;4

     Weist et al. (1984) and Weist et al. (2004) show that patterns of acquisition are seriously influenced by the organisation of the tense-aspect system of the target language.

4. Research questions

     The present paper addresses the following research question: Is there evidence of temporal deixis in the child data? This issue is investigated by responding to the

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[1] Table 1 is extracted from Table 4 in Weist et al. (2004: 43).

following secondary questions: (i) Is there evidence of the contrastive use of the tenses in the data?; (ii) Is there evidence of temporal uses of the *perfect compus* and future?

We argue that there is evidence for the emergence and development of a deictic system in child B.'s longitudinal data. The first argument is that the child is able to inflect a large number of verbs in tense forms that correspond to the present, past and the future in the adult language. Some verbs are inflected for distinct tenses as early as 2;1. The second argument is that the order of emergence for the Romanian tenses is *prezent, perfect compus*, periphrastic future regardless of the (a)telicity of the predicate, contrary to the prototype account. This shows that the tense forms are not markers of (a)telicity. These arguments are presented in section 6. Having established that tensed verb forms are used contrastively in the corpus, we need to ascertain whether they express deictic temporal relations - simultaneity, anteriority, posteriority to speech time. In section 7 we show firstly that the *perfect compus* child predicates do have a temporal past reading, not only an aspectual resultative one. We show that the child is able to make reference to events in the remote past from the very beginning and does not restrict the use of the *perfect compus* to recent resultative events. Secondly, we show that some future predicates produced by the child have an anticipatory temporal value, not only a volitional modal one.

5. The data

The analysis uses one corpus of longitudinal data (Avram corpus, see Avram 2001). Child B. (a girl) was recorded weekly and monthly for one hour while in spontaneous conversation with adults. The corpus was collected and transcribed in the CHILDES format (MacWhinney and Snow 1985). Details about the corpus are given in Table 2.

Table 2 Child data

Child	Source	Age Range	Sessions	Predicates
B.	Avram corpus	1;6-2;11	19	1511

6. The Contrastive Use of Tense-Aspect Forms

This section shows that there is ample evidence for the contrastive use of tense-aspect forms in child B.'s longitudinal data. It shows that the child is able to inflect at least fifteen verbs in the *prezent, perfect compus* and periphrastic future. Contrastive use sometimes occurs in the same file, at very early ages. In addition, telicity does not influence the order of emergence of these inflections.

Roger Brown (1973) gives the order in (9) for the acquisition of functional morphology in English.

(9)   **Order of acquisition for English inflections**
   1.   Present progressive (*-ing*)
   2.   Past irregular
   3.   Uncontractible copula (*is*, *am*, *are*)
   4.   Past regular (*-ed*)
   5.   Third person singular (*-s*)

Brown (1973) considered that a morpheme was acquired if it was used correctly in obligatory contexts at least 90% of the times. This paper does not use this criterion; it merely records the age at which a particular morpheme is used for the first time spontaneously (including the rare cases where it occurs as a partial repetition of the input).

In child Romanian, the order of emergence of verbal morphology for the data of child B. is shown in (10). Almost all of the verbs produced are inflected for agreement (with the exception of bare participles), as there are no root infinitives in child Romanian. The copula is the first to appear, in contracted and non contracted form at 1;6. The present and bare participle are first meaningfully used at 1;9, although they are partial repetitions of the input. At 1;11 both the imperative, the full subjunctive [with the particle *să*] and the full *perfect compus* are used for the first time. In child B.'s corpus there is a stage during which the child uses both the bare participle and the full *perfect compus* (Coene and Avram 2002), but the percentage of bare participles is quite small compared to other child languages (Stoicescu 2011a). The *imperfect* emerges on stative verbs at 2;3, at the same time as the periphrastic future.

(10)   **Early Romanian verbal morphology (child B.)**
   1.   contracted and non-contracted copula *nu-I / nu e* 'not is': 1;6.18
   2.   present and bare past participle: 1;9.03
   3.   imperative and bare/full subjunctive and full *perfect compus*: 1;11.26
   4.   the *imperfect* and periphrastic future: 2;3.23

For our first analysis, following Weist et al. (2004), we identified the verbs that the child B. was able to inflect for at least two tenses in the corpus and the age of emergence for those tense forms. The respective ages of emergence for each tense are presented in Table 3. The inflectional forms we looked for were the *prezent*, the bare participle and/or the *perfect compus*, the *imperfect*, and the periphrastic future, either in its colloquial or standard form. Table 3 and the examples below show that the child's tense-aspect module, a part of her inflectional system, is operative very early on since the child builds contrasts pertaining to tense and grammatical aspect.

The data in Table 3 show that, before the age of three, child B. inflects fifteen verbs for the *prezent*, the *perfect compus*, and the colloquial future. These verbs are *a fi* 'be', *a mânca* 'eat', *a face* 'do/make', *a pleca* 'leave', *a pune* 'put', *a (se) da* 'give', *a bea* 'drink', *a scoate* 'take out', *a lua* 'take', *a veni* 'come', *a merge* 'go', *a plânge* 'cry', *a se duce* 'go', *a cădea* 'fall', *a opri* 'stop'. The list contains both telic verbs (e.g. *a pleca* 'leave') and atelic verbs (e.g. *a plânge* 'cry'). Relevant examples are given below.

The verb *a veni* 'come' enters telic predicates. It is first inflected for the *prezent* at 1;11 (11a), for the *perfect compus* at 2;2 (11b), and for the future in the same file at the age of 2;2 (11c). The child produces two more future predicates with this verb at 2;6 and 2;7.

(11) *a veni*
   a.   vine   mu(s)ca.   B. 1;11.26
          come-PREZ fly-the
          'The fly is coming.'
   b.   a   venit (r)ața.   B. 2;2.23
          has come duck-the
          'The duck has come.'
   c.   o să vină.   B. 2;2.13
          o SĂ come-SUBJ
          '(The duck) is going to come.'

Table 3 Ages of emergence of the Romanian tenses in child B.'s corpus

	Prezent	**Perfect Compus**	**Imperfect**	**Future**
a fi	1;6	2;3.28	2;7.20	2;10.19
a se juca	1;9.21	2;1.18		
a mânca	1;10.01	2;1.18		2;7.20
a mușca	1;10.29	2;1.18		
a trage	2;1.18	2;1.18		
a face	1;9.21	2;1.18		2;7.20
a pleca	2;0.11	1;11.26 (BP)		2;11.22
a pune	1;11.26	1;11.26 (BP)/2;3.23(PC)	2;8.19	
a striga		2;2.13		2;2.13
a ieși	2;1.18	1;10.07		
a (se) da	1;9.21	1;11.26 (BP)/2;2.13 (PC)	2;8.19	
a bea	2;2.13	2;2.13		2;11.22
a scoate	2;4.11	2;5.18		2;8.19
a lua	1;10.29	1;11.26 (BP)		2;8.19
a veni	1;11.26	2;2.23		2;2.13
a spăla		2;4.11	2;6.8	2;2.13
a striga		2;2.13		2;2.13
a merge	2;1.18	2;11.22		2;7.20
a plânge	1;9.21	2;3.23		2;7.20
a se duce	1;9.21	2;3.23		2;10.19
a cădea	1;11.26	2;3.23		2;10.19
a opri	2;7.20	2;4.11 (BP)		2;11.22
a avea	1;11.26	2;4.11	2;3.23	
a sta	1;11.26	2;6.8	2;3.23	
a vrea	1;9.21	2;2.13 (BP)/2;7.20 (PC)		
a putea	10.29	2;4.11	2;8.19	
a auzi	1;11.26	2;7.20		

BP = Bare Participle (*văzut* 'seen'); PC = *Perfect Compus*

The verb *a plânge* 'cry' enters atelic predicates. It is first produced in the *prezent* form at 1;9 (12a), in the *perfect compus* at 2;3 (12b), and in the future at 2;7 (12c). The child does not know the subjunctive 3rd person singular form necessary to build the periphrastic future and uses the *prezent* form instead at this age (12c). At 2;8 this error is remedied, and the subjunctive form is used for the future (12d).

(12)   *a plânge*
    a.   nu plânge.   B.1 ;9.21
          not cry-PREZ
          '[B.] doesn't cry.'
    b.   da şi am plâns.   B. 2;3.23
          yes and have cried
          'Yes, and I cried.'
    c.   ba nu o să plânge   L.   B. 2;7.20
          not   O SĂ cry-PREZ L.
          'Larisa is not going to cry.'
    d.   o să plângă,   [piticul].   B. 2;8.19
          O SĂ cry-SUBJ [dwarf-the]
          'It [= the dwarf] is going to cry.'

Other verbs are inflected only for the *prezent*, the *perfect compus*, and the *imperfect* (*a avea* 'have', *a sta* 'sit / stay', *a putea* 'can', *a fi* 'fi'). For instance, the stative verb *a avea* 'have' occurs in the *prezent* at 1;11 (13a), in the *imperfect* at 2;3 (13c) and in the *perfect compus* at 2;4 (13b).

(13)   *a avea*
    a.   asta nu are.   B. 1;11.26
          this not have-PREZ
          'This doesn't have.'
    b.   nu, au   avut ţigă(r)i.   B. 2;4.11
          no, have had cigarettes
          'No, they had cigarettes.'
    c.   avea...   un xxx... un puiuţ care   stătea   acolo.   B. 2;3.23
          have-IMP a xxx   a   baby which stay-IMP there
          'It had a baby that stayed there.'

Another category of verbs are used only in the *prezent*, and the *perfect compus* (*a vrea* 'want', *a se juca* 'play'). For instance, the atelic verb *a se juca* 'play' appears in the *prezent*[2] at 1;9 (14a) and in the full *perfect compus* form at 2;1 (14b).

(14)   *a se juca*
    a.   jucăm.   B. 1;9.21
          play-PREZ
          'We play/Let's play.'

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[2] The predicate in (14a) could also be a bare subjunctive, given its volitional reading.

    b.   m- am jucat cu mingea.   B. 2;1.18
                REFL have played with ball-the
                'I played with the ball.'

      A crucial observation that can be made by assessing the data in Table 3 is that, for the majority of verbs, the *prezent* form emerges first, followed by the *bare participle* or the *perfect compus*, followed by the *future*. No rigid pattern is evident when we evaluate the order of emergence of a particular inflection in relation to the (a)telicity of the predicate. For instance, it is not the case that all telic verbs occur in the *perfect compus*, which is perfective, before they occur in the imperfective *prezent*, as would be expected if the prototype account were on the right track. For instance, the verbs *a scoate* 'take out', *a lua* 'take', *a veni* 'come', *a se duce* 'go', *a cădea* 'fall', which typically enter telic predicates, first occur in the *prezent* and only later in the *perfect compus*, not the other way around.

      A second observation is that the child may use several inflections on the same verb during the same recording at the very beginning of language acquisition. At 2;2, B. inflects the atelic predicate *a bea bere* 'drink beer' both in the *prezent* (15a) and the *perfect compus* (15b):

(15)   a.   și Bianca nu bea   be(r)e, tata bea   be(r)e.   B. 2;2.13
            and Bianca not drink-PREZ beer,   dad drink-PREZ beer
            'And Bianca doesn't drink beer, Daddy drinks beer.'
        b.   a   băut... a   băut be(r)e Cătă.   B. 2;2.13
            has drunk   has drunk beer   Cătă
            'Cătă drank beer.'

At 2;3, the telic predicate *a cădea* 'fall' is inflected in the *prezent* (16a) and *perfect compus* (16b) in the same file:

(16)   a.   cad .   B. 2;3.23
            fall-PREZ
            'I fall.'
        b.   ia uite... ia uite... a căzut   pijitoaia [vrăjitoarea].   B. 2;3.23
            look   look   has fallen witch-the
            'Look, the witch has fallen.'

At 2;2 B. inflects the same verb in the future (17a) and *perfect compus* (17b).

(17)   a.   am să strig   la urs.   B. 2;2.13
            have SĂ call-out-SUBJ at bear
            'I am going to call out to the bear.'
        b.   n- am st(r)igat   la (r)ață.   B. 2;2.13
            not have called-out at duck
            'I haven't called out to the duck.'

At 1;11 *a pune* 'put' is inflected in the *prezent* (18a) and it also appears as a bare participle, signalling perfective aspect.

(18)   a.   pun   aicea.   B. 1;11.26
             put-PREZ here
             'I put here.'
       b.   aco(l)o pus   tanti Jeni coajă.   B. 1;11.26
             there   put-PART auntie Jeni shell
             'Auntie Jeni put [the] shell there.'

To sum up, in this section we have shown that there is early contrastive use of tense-aspect forms for a large number of verbs. However, what do these tense-aspect forms mean for the child? In order to argue for the emergence of a temporal deictic system, we need to show that at least some of the tensed predicates produced by the child have a temporal, not purely aspectual or modal interpretation. For instance, we need to show that the child is able to use the *perfect compus* to describe events that belong to the remote – not recent – past. If the child produced the *perfect compus* only in reference to recent past events with results in the present it might be argued that she has an aspectual use of this morphology (as claimed by proponents of the Aspect First Hypothesis). If the child is able to describe remote past events without a result state using the *perfect compus* it means that she has valued the temporal [+past] feature of the *perfect compus*. As regards the periphrastic future*,* we must show that the child does not use this morphology exclusively as a modal marker, but as a marker of temporal posteriority as well. These issues are addressed in the next section.

7. The interpretation of early tense morphology

In this section, we look more closely at the contexts of occurrence of the early *prezent*, *perfect compus* and future predicates produced by child B. Let us start with a discussion of the *prezent* predicates. There is evidence that the child is aware of the obligatory contexts of use for the *prezent* very early on. At 2;4, child B. uses the *prezent* with an ongoing interpretation. In (19), B.'s mother asks her what she is doing and the child replies that she is making a cassette.

(19)   fac   o casetă.   B. 2;4.11
       make-PREZ a cassette
       'I am making a cassette.'

At the same age, the *prezent* is used with a volitional interpretation. In the example below, child B. expresses her wish to leave.

(20)   duc.   B. 2;4.11
       leave-PREZ
       'I am leaving.'

At 1;10.07 child B. uses the *prezent* with a habitual interpretation for the first time. In (21a), she describes a property of certain singing toys, not an event in progress. At 2;1 the habitual reading is generated again. In (21b) the child is asked whether she loves Dolly, the dog. She says she doesn't because Dolly bites.

(21)   a.   cîntă   (maimuţoii).   B. 1;10.07
                sing-PREZ (monkeys-the)
                'The monkeys sing.'
       b.   nu, că e...   mu(ş)că   Dolly.   B. 2;1.18
                no, that be-PREZ... bite-PREZ Dolly
                'No, 'cause Dolly bites.'

At 1;10.07, child B. refers to a future event for the first time by using the *prezent* (22). Mother has spilt water on the table. The child reassures her by saying that the table will dry.

(22)   se   usucă.   B. 1;10.07
        REFL dry-PREZ
        'It will dry.'

The *prezent* with a future interpretation is also used at 1;11.26. B.'s mother tells her to get down and B. states that she is going to fall. The verb is incorrectly inflected for agreement (2nd person singular, instead of 1st person singular), but it is clear that the child is able to anticipate what will happen to her if she listens to her mother.

(23)   cazi.
        B. 1;11.26
        fall-PREZ-2SG
        'You are going to fall.'

We also found a generic *prezent* predicate produced at 2;1.18. B.'s mother tells her that the wolf eats meat. The child replies that the lion also eats meat.

(24)   şi leu(l)   mănîncă (carne).   B. 2;1.18
        and lion-the eat-PREZ (meat)
        'The lion also eats (meat).'

     To sum up our discussion of the *prezent* predicates, there is evidence that, before the age of 2;5, the the ongoing, volitional, future, habitual, and generic readings of the *prezent* are accessed by the child. Let us turn now to the *perfect compus* predicates in the corpus. We will begin by pointing to some issues related to the use of the past tense in child language. Contrary to the Piagetian claim that young children are ego-centric and find it difficult to de-centre and represent past events (Antinucci and Miller 1976), more recent research on children's representation of events (Bauer and Mandler 1989) showed that young children do have the cognitive capacity to think about events in the past. This

conceptual "readiness" allows them to tackle the very difficult task of identifying the language forms that express "pastness".

Longitudinal corpora of early child language contain evidence that children talk about past experiences, even at the one-word stage. To give an example from child B.'s corpus, in (25) the mother asks child B. what she did in the morning with her grandmother who baby-sat her. B. sighs twice and then adds *aşa* 'so'. She is probably miming one of her grandmother's actions, which means she has a representation of that past event. [3]

(25)   M: şi ia spune ce-ai făcut dimineaţă cu Babi ?
              'and tell me, what did you do with Babi in the morning?'
        C: 0. [B. sighs]
        M: doar atît? nu-mi vine să cred . nu pot să cred c-aţi făcut doar atît!
              'only that? I can't believe it. I can't believe that's all you did.'
        C: 0. [B. sighs again]
        M: era Babi atît de obosită ?
              'was Babi that tired?'
        C: aşa.   B.1;5.26
              'like that.'

Children as young as 1;8 may describe sequences of two events as in (26), where the child describes an incident at the zoo (Smith 1980: 271):

(26)   C: Try eat lid.   Christy 1;8
        A: What tried to eat the lid?
        C: Try eat lid. Goat…man said no…goat try eat lid…man said no.

B. is also able to correlate two temporally linked events. In (27) an adult asks B. whether she likes milk. B. adds the word *duş* 'shower' – and her mother explains that it is after the shower that she drinks the milk. The child connected the showering and milk drinking events.

(27)   A: îţi place laptele?
              'do you like milk?'
        C: duş.   B. 1;10.07
              'shower.'

In conclusion, it is now certain that children have the cognitive capacity to represent recent and remote past events, and attempt to describe them according to the linguistic knowledge they have at each stage of their development. Gradually, as the child identifies the verb as a separate category and acquires the appropriate inflections, his

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[3] When B. is in her one-word stage, she responds to past tense questions using several communicative strategies. She either performs an action without saying anything, or repeats the most salient word in the adult's past question.

encoding of pastness becomes more adult-like. The next question is what tense morphology encodes when it is used for the first time. Is it used in an adult-like fashion? Does, for instance past tense morphology encode the same semantic features it does in the adult language?

A common view is that aspect emerges earlier than tense. Sano and Hyams (1994) assert that the morpheme -*ed* encodes perfectivity, rather than past tense in the early stages. Antinucci and Miller (1976: 183) maintain that early pasts have "more of an aspectual than a temporal value" because "the child is able to make reference to and encode past events only when their character is such that they result in a present end-of-state of some object" (Antinucci and Miller 1976: 182). State and activity verbs are not used in the past because they are not resultative (Antinucci and Miller 1976: 184). Szagun (1979, in Weist et al. 1984) claimed that none of German children's first past tense inflected verbs produced at 2;3 pointed to events in the remote past.

However, in child B.'s data, the *perfect compus* is used from the beginning both in relation to recent past events with present results (28a) and remote past events (28b). A close look at the context in which the predicates appear confirms this. In (28a), B.'s father has just come out of the bathroom, and the *perfect compus* indeed describes a very recent resultative event. However, the bare participle in (28b) is spontaneously produced and refers to the fact that child B. "Anta" had her hair cut by Doina on a previous Sunday. This is a remote past predicate. These examples are produced at 1;10.

(28)   a.   a   i(e)șit.   B. 1;10.07
              has come-out
              'He has come out.'
       b.   Doina tuns.   B. 1;10.29
              Doina cut-hair-PART
              'Doina has cut [her] hair.'
       c.   Anta tuns.   B. 1;10.29
              Anta cut-hair-PART
              '[She] has cut Anta's hair.'

Another very clear example of a bare participle predicate referring to a remote past event is (29), which was produced at 1;11. Child B. describes what she did during a visit to family friends the previous weekend. She says that she bathed. The mother has stated earlier that the visit took place on Saturday and Sunday.

(29)   Bianca (fă)cut baie.   B. 1;11.26
       Bianca done bath
       'Bianca bathed.'

In the sentence in (30) child B. uses a full *perfect compus* and speaks about the fact that she has been bitten by her cat. It is an experiential use of the *perfect compus*.

(30)   pisi... și a   mu(ș)cat și pisi [pe B.].   B. 2;1.18
       cat... and has bitten   and cat [B.]
       'The cat has bitten [Bianca].'

In the sentences in (31), B. speaks about what she did earlier while she was at nursery school. She went to the park with the other children and she played with the ball (31a). This is an atelic non-resultative predicate which is clearly temporally past. She also describes what her nursery assistant did – she did not make soup (31b), she pulled somebody's ear (31c).

(31) a.   m-   am jucat cu mingea [azi   în parc].   B. 2;1.18
            REFL have played with ball-the [today in park]
            'I played with the ball.'

      b.   nu a   făcut cio(r)bă [azi   la creşă].   B. 2;1.18
            not has made soup   [today at nursery]
            'She did not make soup.'
      c.   t(r)as de u(r)eche.   B. 2;1.18
            pull-PART of ear
            'pulled [his] ear'

In the sentence in (32), B. uses the *perfect compus* to emphasize that it was at the nursery that she slept yesterday (the adverb *ieri* 'yesterday' had been used in the previous context by the adult).

(32) la c(r)eşă am făcut [nani   ieri].   B. 2;2.13
      at nursery have done [bye-bye yesterday]
      'I slept at the nursery (yesterday).'

In (33), B. speaks about the doctor giving her an injection the previous week.

(33) a   venit ţînţaru(l) la nenea doctoru(l) şi m-   a   zgîriat   aicea.   B. 2;6
      has come mosquito at uncle doctor-the and REFL has scratched here
      'A mosquito came to the doctor and scratched me here.'

     To sum up, bare participle or *perfect compus* predicates referring to remote past events, hence having a temporal, not aspectual interpretation, are produced from 1;10 by child B. Table 4 presents the percentage of remote past *perfect compus* predicates in the corpus from 1;10 to 2;7. It shows that even when the child produces few *perfect compus* predicates (between 1;10 and 2;4), some of them describe remote past events. From 2;5, the number of such predicates increases.

Table 4 Percentages of *perfect compus* predicates referring to remote past events

Age	Percentage
1;10.29	100 (N=2)
1;11.26	18 (N=2)
2;1.18	21 (N=3)
2;2.13	28 (N=5)
2;3.23	7 (N=1)
2;4.11	6 (N=3)
2;5.18	12 (N=6)
2;6.8	22 (N=6)
2;7.20	29 (N=20)

In conclusion, child B.'s corpus contains numerous examples of *perfect compus* predicates denoting remote past events (contrary to Szagun 1979). This is evidence that the child knows that this inflectional morphology can be used in situations of anteriority to speech time, even when there is no immediately apparent resultative connection between the respective situation and the present (contra Antinucci and Miller 1976). This points to the existence of a system of temporal deixis. Let us move on to the future predicates in the corpus.

Child B. makes reference to future events using either the *prezent* or the periphrastic *o să* future. The *prezent* fulfills this role more often than the future. This is consistent with the adult language. For instance, in the longitudinal corpus of child Romanian, adults used the periphrastic future extremely rarely (see Table 5). Adults normally refer to future events by using the *prezent*, as in (34), and children follow their example (35). In (36) B. uses the *prezent* with a future interpretation in a temporal clause (36a) and a conditional structure (36b):

(34)　　M:　　las că　mergem duminică la Neajlov la rîu.
　　　　　　　let that go-PREZ Sunday　at N.　　at river
　　　　　　　'don't worry, we'll go to the river on Sunday.'

(35)　　a.　　şi　pe urmă vine　　　Lala?　　　　　　　　　　　　　　　　B. 2;7
　　　　　　　and then　　come-PREZ Lala
　　　　　　　'and then will Lala come?'

　　　　b.　　A:　　voi　　cu　ce　vă　îmbrăcaţi la serbare la grădiniţă?
　　　　　　　　　　you-PL with what REFL dress　　at festival at nursery
　　　　　　　　　　'what are you going to wear at the nursery festival?'

　　　　　　　C:　　eu mă　îmbrac　　cu　rochiţă　mai　frumos de a mea
　　　　　　　　　　I　REFL wear-PREZ with dress-DIM more beuatiful of mine
　　　　　　　　　　de la Lala.　　　　　　　　　　　　　　　　　　　　　B. 2;11
　　　　　　　　　　from Lala
　　　　　　　　　　'I am going to wear a more beautiful dress of mine from Lala.'

(36) a. cînd mai **curge** nasu(l)... eu batistuţa asta.   B. 2;5
         when more run-PREZ nose-the...I handkerchief-DIM this
         'When the nose run again…   I (will use) this handkerchief.'
      b. vine Moş C(r)ăciun dacă....do(r)m în...**stau** în pat. B. 2;7
         come-PREZ Santa Claus   if... sleep-PREZ in...stay-PREZ in bed
         'Santa Claus will come if I stay in bed.'

Table 5 Number of occurrences of the periphrastic future in adult speech in the corpus of child B. at various ages

1;5.12	1;5.19	1;5.26	1;6.02	1;6.09	2;2.13	2;4	2;10
4	1	1	6	3	6	4	3

Let us turn now to the future predicates produced by the child. Table 3 shows that *future* forms are produced from the earliest files, but more frequently after the age of 2;7. The future is used both with a volitional reading expressing the child's desire for an event to happen and with a temporal reading. In example (37) the child has just said that Boots is dirty and then spontaneously adds that she will wash it. The sentence expresses her intention to wash Boots. Here the future predicate has a volitional interpretation. Most of the future predicates produced by B. have this desirative nuance. However, at 2;7 B. uses the future to describe an event that will take place at a clear future time (38). The adults do not use the future in the preceding input, but they establish the time reference for the event that the child describes – next Saturday they are going to Deva. The child adds a more specific destination, although it is not clear whether the castle is real or make-believe. What is important is that B. associates the future temporal reference given by the adults with the use of the future tense.

(37) o să (îl) (s)păl.   B. 2;2.13
      O SĂ   wash
      'I will wash it.'
(38) A1:   unde mergem noi sîmbătă?
              'where are we going on Saturday?'
      A2:   să nu-mi spui că iarăşi pleci la Deva.
              'don't tell me you are going to Deva again' (...)
      C: da, că o să mergem la castel.   B. 2;7.20
              yes, that O SĂ go-SUBJ to castle
              'Yes, 'cause we are going to go to the castle.'

As we stated before, the use of the future is not always connected to a volitional reading. In (39) the child is looking at pictures of animals in a book and she sees a wolf. She claims that the wolf will come and eat Dani. Dani is a real person, but the context is again *irrealis*.

(39)   acuma o să vină   lupul   şi o să mănînce pe Dani.   B. 2;7.20
        now   O SĂ come-SUBJ wolf-the and O SĂ eat-SUBJ PE Dani
        'Now the wolf will come and will eat Dani.'

The situation related to example (40) was the following: Father tells B. that he didn't
want her to write anything on a book with Mickey Mouse. The child contradicts him and
says that L. will not cry. L. told the child before that one should not write on books.
Hence the child knows that if she writes on the book L. will be upset. She anticipates that
her father will use this argument ('L. will cry') and states that this will not happen. The
child is not only capable to use the future to describe anticipated events, but she also
reads into the adult's mind and anticipates his arguments.

(40)   A: nu, nu vreau să scrii pe Mickey Mouse (...)
                'no, I don't want you to write on Mickey Mouse'
        C: ba nu o să plînge   L.   B. 2;7.20
                not   O SĂ cry-PREZ L.
                'L. is not going to cry.'

At 2;8 B. uses the adverbial construction *azi după-masă* 'today in the afternoon' with a
future predicate. She says that in the afternoon her daddy will take her to the *gărgăriţă*
'ladybird' (probably a spring rider) and she will have a go in it.

(41)   că mă dau la gărgăriţă azi   după masă ...o să mă ia   tati şi o să mă dea la
        that CL give at ladybird today afternoon... O SĂ CL take-SUBJ daddy and O SĂ CL give at
        gărgăriţă.   B. 2;8
        ladybird.
        'cause I will have a go in the ladybird this afternoon...daddy will take me and I
        will have a go in the ladybird.'

At 2;8 B. uses the future again in a pretend situation in which she tells the adults to take
care of the toy or it will cry.

(42)   să ai   grijă de ea că o să plîngă....   B. 2;8
        SĂ take-SUBJ care of her that O SĂ cry-SUBJ
        'Take care of her or else it will cry.'

In (43) B. and L. are talking about swimming pools that they see in a magazine. The child
says she wants to go the places in the magazine and there she will fall in the water. Hence
she anticipates a potential dip into the swimming pool. The future predicate might have a
volitional reading as well. She also states that she will take something (probably a toy)
with her in the water.

(43)   ca să merg   şi eu aici şi aici. Şi- o să cad   aici în apă.
        that SĂ go-SUBJ and I   here and here and O SĂ fall-SUBJ here in water.
        'So that I should go here and here as well. And I am going to fall here in the water.'
        ...

şi   o să iau   în apă   asta pang.
and O SĂ take-SUBJ in water this pang.
'And I am going to take this pang into the water.'   B. 2;10

In (44) the situation is the following: B. is upset with her mother and she says she is going to leave and she describes a long sequence of actions that she is going do. She is going to go to the bathroom and wash herself and then she is going to take some milk and eat it in bed. The events are described with future predicates, but they are not only intentional, but also temporally anticipatory, because the child represents them as temporally connected, a fact demonstrated by her use of the adverbial expression *pe urmă* 'then'. This is a pretend situation for B. because a few moments later she tells her mum that she has returned home.

(44)   las că   eu o să mă duc   la baie   acolo şi- o să mă spăl
         let that I O SĂ CL go-SUBJ at bathroom there and O SĂ CL wash-SUBJ
         p-aicea (...)
         here (...)
         şi   pe urmă o să... mă duc   şi- o să iau   lăptic şi- o să mănînc.
         and then   O SĂ... CL go-SUBJ and O SĂ take-SUBJ milk   and O SĂ eat-SUBJ
         □i- o să -l mănînc în pat şi gata.   B. 2;11.22
         and O SĂ CL eat-SUBJ in bed and ready.
         'don't worry, I'll go to the bathroom and wash myself here and here and then I'll go and I'll take milk and I'll eat. And I'll eat it in bed and that's it.'

In (45) B. uses the future in a conditional construction:

(45)   dacă n- o ierţi   pe Dolly, nu... n- o să mai vină   vecinii
         if   not CL forgive PE Dolly, not... not O SĂ more come-SUBJ neighbours-the
         acasă...   B. 2:6
         home
         'If you don't forgive Dolly the neighbours won't come home.'

The data reviewed show that the *prezent* and the periphrastic future are used in child Romanian to denote posteriority to speech time, as they are in the adult language. This indicates that a basic system of temporal reference is present in child B.'s grammar.

8. Conclusions

This paper has investigated whether there is evidence of temporal deixis in early child language. It has shown that up to the age of 3;0 a basic system of temporal reference is in place. This system is not completely adult-like from the beginning because the child needs time to detect the semantics of inflectional morphology. In what regards the *prezent*, *perfect compus*, and future, we found evidence of adult-like usage of these morphologies. We demonstrated that the child uses a significant number of verbs in a contrastive way. Some verbs are inflected for distinct tenses in the same file and as early as 2;1. The order in which the tense forms emerge is *prezent*, *perfect compus*, future

regardless of the situation aspect of the predicate, contrary to the claims of the Aspect First Hypothesis. This is evidence that these tense forms do not encode situation aspect. We showed that the *prezent* is used appropriately in ongoing, volitional, future, habitual and generic contexts. The *perfect compus* is used to describe both recent resultative events and remote non-resultative ones. This indicates that the *perfect compus* is not an aspectual marker. Lastly, some of the future predicates produced by the child have a clear posteriority reading, hence there is a temporal use of this form. All these facts point to the existence of a system of temporal reference in early child Romanian.

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