Emergence of Case Meanings in Russian –
Empirical Evidence from One Month, from One Child

Summary

Introduction

The article presents emergence of case marking on nouns and development of case meanings within one month in the acquisition of Russian. For this purpose density recordings of 1;9 were extracted from longitudinal data of Liza E. As revealed by the analysis, within less than one month the inflections of all cases occur in singular. Data show that the emergence of case marking and case meanings take place parallel to a continuous use of one-word utterances. Rich inflectional morphology (being combined with sufficient lexicon) compensates for the poverty of argument structure and the complexity of an utterance. The child does not need several components in the utterance to make it clear.

Aim of the study

Beyond a descriptive goal, this study aims at tracing order of the emergence of case meanings at age 1;09 with one child. At the same time it gives brief information about the early lexicon, number of components of utterances and lexical spurt in nouns and case meanings around age 1;09.

Materials and methods

Longitudinal videotaped recordings of Liza E. at the age of one month were used. All density recordings from 1;09 were divided according to the equal intervals, so that the occurrence of all case forms and meanings during 27 days was traced.

Results

The data provide evidence for the emergence of all case forms and a broad range of case meanings within approx. one month. This intensive increase within a relatively short period of time can be called an inflectional spurt in noun case inflection and case meanings. Earlier, at 1;08, a vocabulary spurt in Liza was documented. The intensive development in the domain of the lexicon and noun morphology around 1;09 was not documented for syntax: the number of utterance components stayed at the level of one or two words. Thus, our empirical data do not corroborate the co-development hypothesis of Rispoli (1999), who proposes co-development of case marking and agreement of subjects with verbs.

The order of the emergence of cases is NOM, ACC, LOC, GEN, DAT, and INST. These case meanings occur gradually, despite the restricted interval between their first occurrences.

Conclusions

Our empirical data do not corroborate the co-development hypothesis of Rispoli (1999), who proposes the co-development of case marking and agreement of subjects with verbs. We presented only the initial occurrences of case meanings and did not treat the contrastive case oppositions, so the question about factors determining the acquisition of a given form or category stays beyond the scope of the present article. The order of occurrence of case forms and meanings in general does corroborate previous findings on the acquisition of cases in other languages (see, for example (Szagun 2004; Tracy 1986; Voeikova, Dressler 2002)).

Key words: first language acquisition, case, case meanings, active and passive lexicon
Introduction

Recent studies on first language acquisition of case in Russian concentrated on the establishment of developmental phases of mastering oppositions, on the path and timing of the emergence and development of case oppositions and on the descriptive measures of case marking and case meanings (see for example, Babyonyshev 1993; Gagarina, Voeikova in press; Ионова 2007; Лепская 1988). Performed within various theoretical frameworks these studies point to the impact of syntax, thematic roles (Generative Grammar, Babyonyshev 1993), of semantic classes (Ионова 2007), of frequency, pragmatic value (Лепская 1988), among others, on the acquisition of case. A number of factors influencing the acquisition of case are discussed in (Ионова 2007), such as syntactical factors, cognitive accessibility, pragmatic relevance, frequency and transparency. “However, none of these factors may play a decisive role in the acquisition, rather, the combination of them” (Gagarina and Voeikova in press). The most recent study of (Gagarina and Voeikova in press) following the theoretical statements of the preк and protoкmorphological approach to language acquisition (Dressler 1997b; Dressler, Karpf 1995) examined the acquisition of case and number by four monolingual children. Their threefold aim was “(a) to trace the emergence and development of case and number oppositions from the onset of noun production, (b) to establish developmental phases and to define the criteria of the transition between them, and (c) to account for the mechanisms of case and number acquisition” (Gagarina and Voeikova in press). Additionally, they further developed the so-called PBF measure – Percentage of Basics Forms (Gagarina, Voeikova 2002) – forms of nominative case. They investigated the interrelations between the length of utterances and PBF and found out that some children – “morphologically-oriented” children – do not use long utterances; however, all the words in their speech production have distinct inflectional endings. Other children, on the opposite, showed morphological marking only when a certain level of MLU was reached.1 This tendency had been called the compensatory strategy children may use while acquiring the inflectional marking in the language with rich morphology.

The present study continues the functionalist and constructivist tradition (Bowerman 1980, 1985; Dressler 1997a; Slobin 1985; Tomasello 2003; among others) and postulates an essential impact of input, linguistic structure and pragmatics on the emergence of case inflection and case functions. Additionally, as it has been shown elsewhere a certain amount of lexical entries (or lexicon items) may serve as a platform for the acquisition of morphology (Goldfield, Reznick 1990; Mervis, Bertrand 1995). Therefore the lexicon of the child is addressed. Considering the results of the previous studies we, however, address the question of the emergence of case meanings within a short time-span of one month with density data. Following the descriptive goals of the present article we do not discuss the problem of the acquisition of a case, its marking and meanings, but purely trace the order of the emergence of case meanings. Considering the short period of occurrence of all case forms and the majority of their meanings the investigated phenomenon can be called a case spurt.

Aim of the study

The study aims at tracing the order of the emergence of case meanings at age 1;09 with one child within the case spurt. At the same time it gives brief information about the early lexicon, the lexical spurt in nouns, and the number of components of utterances around age 1;09.

1 A similar tendency had been found in the analyses of inflectional verb marking in Russian-speaking children (Gagarina 2003).
Materials and methods

Longitudinal videotaped data of Liza E. were used for this study. The data had been collected by her mother (the second author of the article)\(^2\) from 0;07.15 (year;month.day) till 3;08. For this article we use the set of data at 1;09; during this month the family was in a dacha on holidays and the mother had time not only to make videotapes, but also to record cautiously a diary of the child's speech. The rich information from the diary was used as well.

The amount of data analysed for this study is presented in Table 1 below\(^3\):

<table>
<thead>
<tr>
<th>Weeks</th>
<th>Number of day</th>
<th>Total number of utterances</th>
<th>Analysed utterances</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>The 1(^{st}) to the 8(^{th})</td>
<td>257</td>
<td>197</td>
</tr>
<tr>
<td>2.</td>
<td>9(^{th}) – 16(^{th})</td>
<td>462</td>
<td>311</td>
</tr>
<tr>
<td>3.</td>
<td>17(^{th}) – 24(^{th})</td>
<td>293</td>
<td>233</td>
</tr>
<tr>
<td>4.</td>
<td>25(^{th}) – 31(^{st})</td>
<td>283</td>
<td>233</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>1295</td>
<td>974</td>
</tr>
</tbody>
</table>

All density recordings were divided according to equal eight-day intervals, so that the occurrence of all case marking during 24 days\(^4\) could be observed.

Target system

The target system of case marking in nouns exhibits six cases with a number of various meanings. Additionally, two numbers and three declensional classes (depending on the gender and final stem sound (Зализняк 1977)) are present in Russian. Case, number and gender inflections are fused in nouns. The case system includes the following cases in singular and plural: nominative (henceforth NOM); genitive (GEN), dative (DAT), accusative (ACC), instrumental (INSTR), locative or prepositional (LOC) (more on functions of these cases see (Gagarina and Voeikova in press).

“With respect to the distinction between semantic and syntactic cases, INSTR and PREP are predominantly semantic cases in Russian, whereas the other cases are syntactic in most uses. Every case has a prototypical semantic function, as well as some marginal functions expressed by a combination of the case form with prepositions or other means” (Gagarina and Voeikova in press).

Results

Early lexicon

Liza’s first words occur at 0;09. The vocabulary spurt had taken place almost one year later, at 1;08 (when the family moved from the city to the dacha for summer holidays); by the age of 1;08 Liza used 113 words, and during the following month the number of her words increased twice and reached 260 items (see Fig. 1 below). At the same time she produced utterances containing mainly one word. The first case oppositions emerged at 1;09. Thus, the emergence of noun inflections immediately follows vocabulary spurt.

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\(^2\) The data had been transcribed and coded in CHAT format (MacWhinney 2000) by M. Akkuzina.

\(^3\) Fully incomprehensible utterances, repetitions, yes-no answers and interjections were excluded from the analyses.

\(^4\) According to the diary’s data of Liza the case forms occur from 1;08.29 to 1;9.18. It is interesting to compare, that in the diary of Zhenja Gvozdev, all case forms occurred during the similar period of 28 days from 1;10.15 to 1;11.13.
Early case oppositions

Liza started to use nouns with NOM inflection from the onset of word production. Although these nouns show the NOM inflection, we cannot consider these forms the inflected forms of NOM, because no oppositions are yet produced (on inflectional marking and oppositions see more in (Гагарина in press)).

The next type of inflected forms occurred in Liza’s data is ACC with the 1st inflectional class. Thus, the first opposition (of forms and meanings) is NOM vs. ACC. Within an interval of several days, we registered the emergence of new cases and the occurrence of new meanings of a case. For example, for ACC at 1;09.00, the meaning of a direct object is used, at 1;09.04 – deliberative and at 1;09.15 – directive.

Examples (1) to (25) below present the successive emergence of cases and their meanings. NOM was registered within the investigated month in three different meanings (Liza also used NOM in the previous months):

1. NOM as a predication and denotation of the referents’ existence:
   - %sit: Liza, point to a hole.
   - Dyrka. ‘Hole.’
   - Agent of an action:
     *MAM: Chto tam duet v sadu? ‘What is blowing in the garden?’
     *LIZ: Veter. ‘Wind.’
   - Attributive relations:
     *MAM: A kakie e~to cvety? ‘What are these )flowers?’
     *LIZ: Vasil’ki. ‘Cornflowers.’

As far as ACC is concerned we consider the forms both of the 1st and 2nd declensional classes. ACC was registered in the three following meanings (examples (4) to (6) occurred within the 1st week of the analyzed month, examples (7) and (8) – the last 4th week):

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5 For the description of case functions we use the terminology of (Зонорова 1988).
Directive:
[What have the cat eaten?] – Travu ‘The grass’ 1;09.00.
Pro-deliberative:
Pro poni’ About pony’ 1;09.03 (with filler instead of preposition).
Na-directive:
Na gorshok ‘To the chamber-pot’ 1;09.05 (with filler instead of preposition).
Za-directive:
[Derzhat’ sja] za Vanju ‘[Hold] Vanja’ 1;09.23 (with filler instead of preposition).
V-directive:
V shkafu ‘In the dresser’ 1;09.25 (with filler instead of preposition).

The meanings of LOC occur within first two weeks of the analyzed month in the following sequence: shortly after v-locative, two different meanings of the preposition na with LOC occur simultaneously – na-mediative and na-locative, finally the so-called outside covering meaning with the preposition v emerges:

V-locative:
V krovati ‘In the bed’ 1;09.04 (with filler instead of preposition). Compare: krovat’ 1;09.00 in the similar context.
Na-mediative:
Na poezde ‘By train’ 1;09.15 (with filler instead of preposition).
Na-locative:
Na krylechke ‘On the porch’ 1;09.15 (with filler instead of preposition).
V- sign of the outside covering:
V sapogah ‘In the boots’ 1;09.15 (with filler instead of preposition).

With GEN six meanings with various prepositions emerge within eight days: fabricative, possesive, locative, benefactive, elative, instrumentive; the destructive emerges later.

Iz-fabricative:
[Piļļa] iz mjaty: [drink] ‘Out of mint’ 1;09.10 (with filler instead of preposition).
U- person as a whole in respect of its part:
[Kosichki] u ani 1;09.10 Anja has [plaits] (with filler instead of preposition).
U-locative:
[Silet’] u papy ‘[To sit] by father’ 1;09.15 (with filler instead of preposition).
Dlja-benefactive:
Dlja vani ‘For Vanja’ 1;09.16 (with filler instead of preposition).
Iz-elative:
[Vysypat’] iz lopaty ‘[Pour out] from the shovel’ 1;09.17 (with filler instead of preposition).
Iz-instrumentive:
Iz stakana ‘From the glass’ 1;09.18 (with filler instead of preposition).
Ot-destructive:
[Kryshka] ot chajnika ‘[A lid] from the kettle’ 1;09.25 (with filler instead of preposition).

The two meanings of DAT are registered in our data within a one-week interval: directive (iative case) with preposition and indirect object.

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6 Words in the square brackets were omitted from the data. They are given here in order to reproduce the general context of utterances.
Conclusions

This article describes the emergence of case meanings in one Russian-speaking child. Within a period of approx. one month – from 1;9.00 up to 1;09.27 – the emergence of all case forms and a broad range of case meanings was documented. This intensive increase within a relatively short period of time can be called an inflectional spurt in noun case inflection and case meanings, see Table 2. Earlier, at 1;08, a vocabulary spurt in Liza was documented. Adjectives, adverbs, a few numerals and pronouns as well as proto-prepositions or fillers (sounding like a Russian [a]) emerged by the age of 22 months along with a considerable number of words that can be identified with the classes of nouns and verbs. The active lexicon was elaborated with words pertinent to multiple parts of speech. Thus, Liza's data show a primary vocabulary spurt and a subsequent inflectional spurt in nouns. Such precedence of a lexical spurt in nouns differ from the developmental path in verbs registered for other Russian-speaking children where the lexical spurt does not necessarily precedes the inflectional spurt (Гагарина in press), although a certain number of lexical items is a necessary condition for the development of inflection in verbs. The intensive development was registered in the domain of the lexicon and morphology but not syntax: the number of utterance components stayed at the level of one or two words. Thus, our empirical data do not corroborate the co-development hypothesis of Rispoli (1999), who proposes the co-development of case marking and agreement of subjects with verbs.

The order of the emergence of cases is NOM, ACC, LOC, GEN, DAT, and INST. This order in general does corroborate previous findings on the acquisition of cases in different languages (see, for example (Szagun 2004; Tracy 1986; Voeikova, Dressler 2002)). As Table 2 depicts (the light grew shades represents the occurrence one or two meanings, the dark shades – three and more meanings), case meanings occur gradually, with some overlapping in days between GEN and LOC with INST.
We presented only the initial occurrences of case meanings and did not treat the contrastive case oppositions, so the question about factors determining the acquisition of a given form or category stays beyond the scope of the present article. A more sophisticated elaboration of the case meanings is necessary. Finally, the connection between declensional classes of nouns and case marking should be discussed as well. These issues will be the matter of the further studies.

References


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