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Easy Way to Language Acquisition: Diminutives in Lithuanian Child Language

Summary

Introduction

In most languages diminutive formation is the first pattern of word formation to emerge. The main reason for this seems to be the pragmatic functions of endearment, empathy, and sympathy, which make diminutives particularly appropriate for child-centered communication. This is especially true for things belonging to the child's world, which the caretakers tend to refer to using diminutives. The frequency of diminutives in the input as well as in the output of children clearly depends on the pragmatic role of diminutives in the respective language. In addition, their greater degree of morphological productivity and transparency, as well as their phonological saliency, favors the use of diminutives (Savickienė & Dressler 2007). Research of the languages where an extensive use of diminutives was noted induced some scholars to advance the hypothesis to the effect that the use of diminutives simplifies the acquisition of nominal declension (Olmsted 1994; Savickienė 2001; Kempe et al. 2001).

Aim of the study

This paper explores the hypothesis that diminutives in child-directed speech provide multiple cues for language acquisition. Diminutives in Lithuanian present an interesting case not only in terms of pragmatics and semantics (a feature which is shared by Lithuanian as well as other languages), but also from a language-specific point of view.

Materials and methods

The following discussion is based on analysis of data from a longitudinal corpus of a Lithuanian girl. For the present study we have chosen to analyze the girl's speech covering the period from 1;7 to 2;6. The corpus consists of almost 35 hours of recordings. The choice of the period was influenced by the fact that the child's onset of morphological development can be dated approximately around the age of 1;7 and continues until the age of 2;6, which marks the phase of morphology proper (Savickienė 2003). The recorded speech was transcribed according to the requirements of CHILDES (MacWhinney 2000).

Results and conclusions

The study suggests that the early and frequent use of diminutives by the Lithuanian child is due to the fact that it not only decreases word-ending variance (restricting the number of paradigm patterns to 3 instead of 12 declension classes), regularize stress patterns, but also facilitates the acquisition of case inflections.

Key words: *Lithuanian, child language acquisition, diminutives, child-directed speech, noun classes.*

Introduction

In most languages diminutive formation is the first pattern of word formation to emerge. The main reason for this seems to be the pragmatic functions of endearment, empathy, and sympathy, which make diminutives particularly appropriate for child-centered communication. This is especially true for things belonging to the child's world, which the caretakers tend to refer to using diminutives. The frequency of diminutives in the input as well as in the output of children clearly depends on the pragmatic role of diminutives in the respective language. In addition, their greater degree of morphological productivity and transparency, as well as their phonological saliency, favors the use of diminutives. Research of the languages where an extensive use of diminutives was noted induced some scholars to advance the hypothesis to the effect that the use of diminutives simplifies the acquisition of nominal declension (Olmsted 1994; Savickienė 2001; Kempe et al. 2001; Savickienė & Dressler 2007).

In this paper, research on the beneficial effects of diminutives in child-directed speech (CDS) on language learning will be presented.

For example, it has been suggested that diminutivization might regularize patterns of metric stress thereby simplifying the problem of word segmentation (Jusczyk 1997; Kempe et al. in press) and of identifying structural patterns at the right edge of words, making them more salient (cf. also Dabrowska 2006).

Dabrowska (2006) also reported a diminutive advantage for children acquiring Polish case marking, and argued that the diminutive advantage in morphology acquisition can be attributed to children's acquisition of low-level schemas. That is, children tend to acquire inflectional changes first for salient sub-clusters of nouns before generalizing to a wider range of noun types.

There is evidence from Dutch and Russian showing that diminutives aid word segmentation and morphology acquisition (Kempe et al. in press). Similar results for the effect of diminutives come from Finnish. In this language diminutives reduce allophony associated with the case marking of nouns, thus rendering the declension system more transparent (Laalo 1998).

At present, the claim that diminutives aid morphology acquisition has been observed not only in longitudinal data, but also tested in experimental studies in several other languages, including Serbian (Ševa, Kempe, Brooks, Mironova, Pershukova & Fedorova in press), Lithuanian (Savickienė, Kempe & Brooks in press), and Polish (Dąbrowska 2006) with results confirmed that young children perform better for diminutives than their simplex counterparts.

V. Kempe, P. J. Brooks and S. Gillis (2007) provide a body of experimental research showing that diminutives, which are pervasive in the child-directed speech registers of many languages, provide a number of cues on different levels of linguistic analysis that are useful for language acquisition. They also report studies showing that Russian diminutives lead to advantages in the acquisition of grammatical gender, both in Russian children as well as in second language learners.

It seems that diminutives are used as bootstrapping devices (cf. Weissenborn & Höhle 2001) in a number of languages where diminutives play a different role in the acquisition of noun.

It has been claimed already that diminutives may simplify the acquisition of inflectional noun morphology and may therefore be preferred to their base nouns. For example, transfer from an unproductive and opaque opposition of the base noun in number and case into a productive and transparent one of the corresponding diminutive would predict a difference in the time course of acquisition. For example, the opposition between Sg. and Pl. in the declension class of It. *ami[k]o*, Pl. *ami[č]i* is both unproductive and morphotactically opaque, whereas the respective opposition between its diminutive Sg. *amichetto* and Pl. *amichetti* (with identical [k]) is both productive and transparent. Accordingly, the productive and transparent opposition may be acquired earlier than the unproductive and opaque one, and in this way diminutives may facilitate the acquisition of morphology (cf. Kempe & Brooks 2001) and strengthen the salience of productive and transparent morphological patterns. Notably, in such cases, the time interval between the emergence of the two partners of the opposition should be ceteris paribus (i.e. after removing frequency effects and other confounding variables) smaller for diminutives than for their simplex bases. Moreover children may prefer transparent and/or productive inflection of diminutives over opaque and/or unproductive inflection of their respective bases (Savickienė & Dressler 2007).

However, if the simplex and its diminutive belong to the same productive and transparent class, then there should be no such shorter time course of acquisition for diminutives nor a preference for diminutives.

In this paper, we will observe the beneficial effects of diminutives in CDS on language learning.

Aim of the study

This paper explores the hypothesis that diminutives in child-directed speech provide multiple cues for language acquisition. Diminutives in Lithuanian present an interesting case not only in terms of pragmatics and semantics (a feature which is shared by Lithuanian as well as other languages), but also from a language-specific point of view.

Materials and methods

1. Data

The following discussion is based on the analysis of data from a longitudinal corpus of a Lithuanian girl named Rūta[1]. She is a first-born child of a middle-class family living in Vilnius. Her speech has been recorded in natural everyday situations by her mother, an educated philologist. Data collection started when the child was 1;3 and continued up to 3;5. Recordings were made three or four times per week; they lasted about fifteen minutes each. For the present study we have chosen to analyze Rūta's speech covering the period from 1;7 to 2;6[2]. The corpus consists of almost 35 hours of recordings. The choice of the period was influenced by the fact that Rūta's onset of morphological development can be dated approximately around the age of 1;7 and continues until the age of 2;6, which marks the phase of morphology proper (Savickienė 2003).

The recorded speech was transcribed according to the requirements of CHILDES (MacWhinney 2000). Adult utterances were transcribed orthographically; the child's utterances, in addition, were transcribed phonetically.

2. Diminutives in Lithuanian

Lithuanian is, at least in the realm of morphology, the most conservative of all living Indo-European languages, characterized by a very rich and complex inflectional morphology. It is a fusional inflecting language in which case marking can not be separated from number marking, and where gender correlates closely with declensional classes. The use of diminutives is rich in types and tokens; therefore, the study of diminutive formation is of a particular interest.

Lithuanian is characterized by a productive formation of diminutives from any noun via one or several competing suffixes. The most frequent and productive suffixes of diminutive formation are the masculine forms *-elis/-ėlis, -(i)ukas, -utis, -ytis, -aitis* and their feminine counterparts in *-ė: elė/-ėlė, -(i)ukė, -utė, -ytė, -aitė*. The unproductive suffixes do not occur either in input or output data.

Diminutives consisting of two subsequent suffixes are quite common in modern Lithuanian, e.g., *dal-el-yt-ė* 'particle-DIM-DIM', *žmog-el-iuk-as* 'man-DIM-DIM', *saul-ut-ėl-ė* 'sun-DIM-DIM'[3]. Double suffixation reinforces the pragmatic effectiveness or the meaning of smallness of the diminutive. The greatest quantity and variety of diminutives can be found in folklore, whereas in modern spoken and written Lithuanian their usage is less frequent, except for the phenomenon of speech directed to children, dear persons or pets.

Disyllabic nouns tend to be diminutivized more often than polysyllabic ones, e.g., *namas* 'house'– *nam-elis, nam-ukas, nam-ytis, saulė 'sun'– saul-ytė, saul-ulė, saul-elė*, but diminutives can also be formed from three- or four-syllable nouns, e.g., *saldainis* 'candy'– *saldain-iukas, saldain-ėlis, balionas* 'baloon'– *balion-ytis, balion-ėlis, balion-iukas, krokodilas* 'crocodile'– *krokodil-iukas*.

Hypocoristics, e.g., *Rūta – Rūt-elė, Rūt-ytė, Saulius – Saul-iukas, Saul-ytis* and special names in child directed speech (CDS), e.g., *mama – mam-ytė, mam-utė* 'mother-DIM', *tėv-elis, tėv-ukas* 'father-DIM' are very common as well. In hypocoristics, as well as in diminutives, all the productive suffixes are frequently used. Hypocoristics are more often formed from two-syllable nouns than from tri-syllabic ones. Hypocoristic truncations do not occur in our input and output data.

[1] Although this study in entirely based on one child's data, we will provide some observations from the other longitudinal corpora which data is not yet systematically analyzed, but some preliminary results are available.

[2] By 'period of observation' (referred to throughout the study) is meant the period from 1;7 to 2;6 unless stated differently.

[3] A word with six diminutive suffixes puod-el-ait-uk-ėl-yt-ėl-is 'cup-DIM (6)' is known from folk tales. Such words are extremely rare in everyday usage.

3. Development of diminutives in child language

In this section the analysis will focus on quantitative aspects of diminutives, hypocoristics and simplicia. As can be observed from Figures 1 and 2, Rūta has been using diminutives and hypocoristics since the very beginning of the recording (1;7). The spurt of diminutives was recorded one month later, i.e., at an early phase of word learning (1;8).

Thus at the beginning of lexicon formation, i.e. at 1;8, diminutives and hypocoristics (48%) are nearly

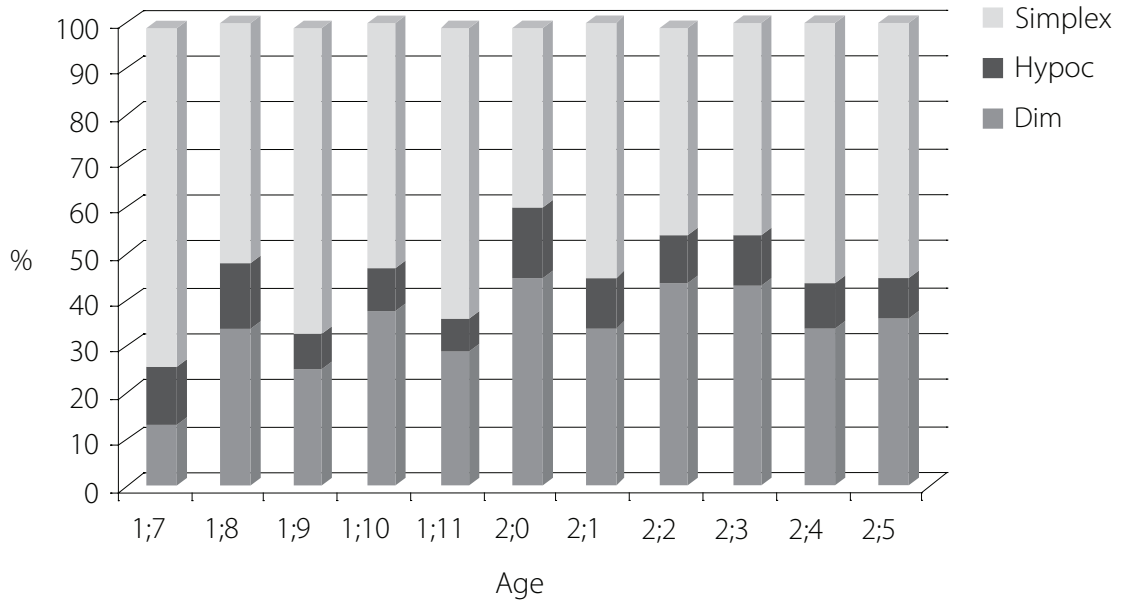

Figure 1

The frequency distribution of diminutive, hypocoristic and simplex types (%) in Rūta's speech (1;7-2;5)

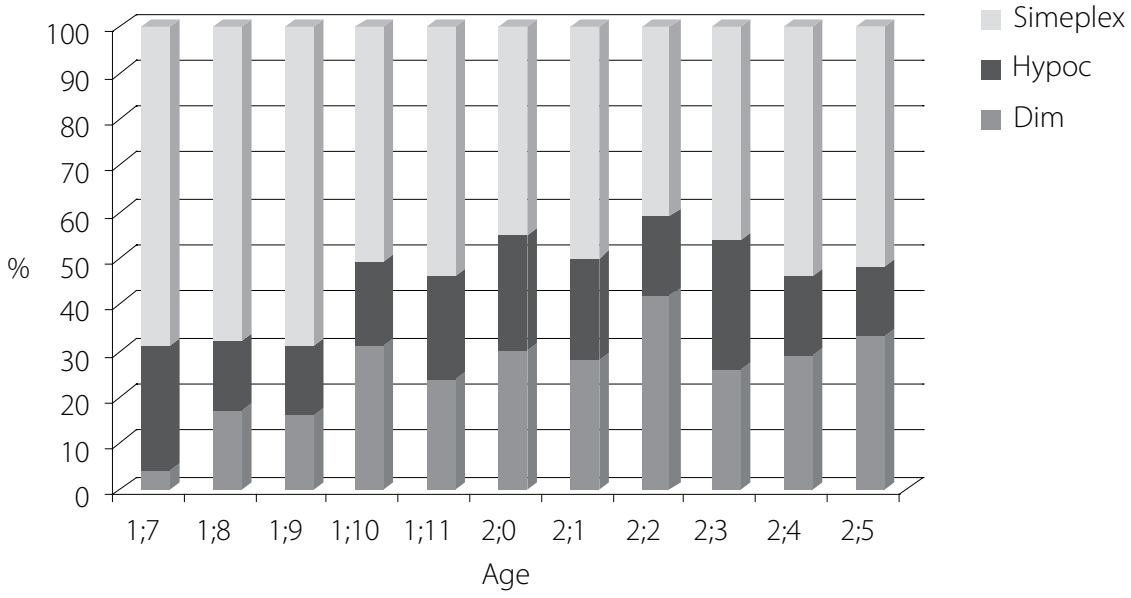

Figure 2

The frequency distribution of diminutive, hypocoristic and simplex tokens (%) in Rūta's speech (1;7-2;5)

as frequent as simplicia (52%). Diminutive tokens (Figure 2) even show a higher percentage of occurrence at the age of 2;0 and 2;2. The number of diminutive and hypocoristic types throughout the period is relatively stable (with the exception of 1;8, which is approximately 45% (Figure 1), whereas the frequency of diminutive and hypocoristic tokens increases during the period of 2;0 and remains at about 50% (Figure 2).

It seems that the frequent use of diminutives and hypocoristics is characteristic of Lithuanian children and their mothers in the initial phase of language acquisition (unpublished observations on more than a dozen families and also from the longitudinal corpora of 3 children). It is claimed in the literature that the period up to the age of three represents the 'peak' of diminutive usage and that in later periods this usage undergoes a sharp decline (King & Melzi 2004). The data analyzed here do not support this claim; in addition, it seems that the mother uses diminutives and hypocoristics very often and we do not observe any decline (see Savickienė 2003).

Let us consider the relevant examples showing Rūta's preference for diminutives. In cases when the mother used a new word in a basic form, at the beginning Rūta uses it in the same way, e.g., *žuvis* 'fish', *bitė* 'bee', *namas* 'house', *kiškis* 'hare', *saldainis* 'sweet', *mašina* 'car', *balionas* 'balloon'. However, all these words, with the exception of *namas* 'house', appeared as diminutives in Rūta's usage after just a few months. It is interesting to compare the relevant token frequencies: at 1;7 *žuvis* (5) – *žuvytė* (1) vs. *žuvis* (2) – *žuvytė* (5) at 2;4; at 2;3 *balionas* (24) – *balioniukas* (1) vs. *balionas* (7) – *balioniukas* (13) at 2;4; the same applies to *saldainis* (26) – *saldainiukas* (1) at 2;3 vs. *saldainis* (11) – *saldainiukas* (11) at 2;5.

4. Diminutives: multiple cues for language acquisition

4.1. Morphotactic transparency. Within the category of nouns diminutives show some processes of morphonological simplification. It is observed that the use of diminutives helps to avoid stem alternations. This is especially obvious in the case of certain classes[4]. For example, masculine nouns *vanduo* 'water' and *šuo* 'dog' (class I.7), and the feminine noun *sesuo* 'sister' (II. isolated paradigm):

Singular of simplex

Nom.	*vanduo*	*šuo*	*sesuo*
Gen.	*vand**en**-s*	*š**un**-s*	*ses**er**-s*
Dat.	*vanden-iui*	*š**un**-iui*	*ses**er**-iai*
Acc.	*vand**en**-į*	*š**un**-į*	*ses**er**-į*
Inst.	*vand**en**-imi*	*š**un**-imi*	*ses**er**-imi*
Loc.	*vand**en**-yje*	*š**un**-yje*	*ses**er**-yje*

Singular of diminutive

Nom.	*vand**en**-ukas*	*š**un**-iukas*	*ses-ytė*
Gen.	*vand**en**-uko*	*š**un**-iuko*	*ses-ytės*
Dat.	*vanden-ukui*	*š**un**-iukui*	*ses-ytei*
Acc.	*vand**en**-uką*	*š**un**-iuką*	*ses-ytę*
Inst.	*vand**en**-uku*	*š**un**-iuku*	*ses-yte*
Loc.	*vand**en**-uke*	*š**un**-iuke*	*ses-ytėje*

The nominative singular of nouns belonging to these classes has no ending, just the stem which ends in -uo, but the other cases (e.g., genitive, dative, etc.) are based on another stem, i.e. *-en-, -un- or -er-* and the appearance of a new element in a word changes it morphotactic transparency and hence causes difficulties to a child. Therefore Rūta uses the nouns from class I.7 as diminutives and avoids this complicated issue (the discussion is continuing in 4.4-4.5).

[4] The explanation on noun classes will appear in 4.4 and Table 1.

4.2. Morphonological palatalization. The other aspect of simplification is related to the process of palatalization: if a noun in the nominative singular ends in *-tis, -tys, -dis, -dys*, in many other cases *t* and *d* change into *č* and *dž* respectively (morphonological palatalization). However, if the diminutive is used, no such changes occur (exemplified below). Consider the noun *dvirat-is* 'bike':

	Sg	**Pl**	**DIM-Sg**	**DIM-Pl**
Nom.	*dvirat-is*	*dvira**č**-iai*	*dvirat-uk-as*	*dvirat-uk-ai*
Gen.	*dvira**č**-io*	*dvira**č**-ių*	*dvirat-uk-o*	*dvirat-uk-ų*
Dat.	*dvira**č**-iui*	*dvira**č**-iams*	*dvirat-uk-ui*	*dvirat-uk-ams*
Acc.	*dvirat-į*	*dvira**č**-ius*	*dvirat-uk-ą*	*dvirat-uk-us*
Inst.	*dvira**č**-iu*	*dvira**č**-iais*	*dvirat-uk-u*	*dvirat-uk-ais*
Loc.	*dvirat-yje*	*dvira**č**-iuose*	*dvirat-uk-e*	*dvirat-uk-uose*

It can be concluded then that the inflection of diminutives is more transparent than the inflection of their bases; therefore it is preferred by young children.

4.3. Prosodic saliency. Another related question to discuss is whether prosodic saliency is a potentially relevant factor since diminutives regularize stress patterns and thus simplify the task of segmenting the speech stream into words (Jusczyk 1997) thus making diminutives easier to identify. It is worth pointing out that the Lithuanian accent is free. Sometimes different forms of the same word may carry the stress on different syllables. However, in the case of diminutives the suffix is always in a focal position by retaining stress. As our data show, diminutive suffixes are almost exclusively stressed (except in the rare instances) and their word-final position makes them easy to be identified, distinguished and memorized by the girl. As a consequence of this (and in contrast to findings with children of many other languages, see Savickienė & Dressler 2007), Rūta does not prefer trochaic diminutives, e.g., *niukas*, or diminutives with two trochees, e.g., *vandeniukas* 'water-DIM', but trisyllabic forms with a stress on the second syllable. The relevant examples are: *duonýtė* 'loaf of bread-DIM', *kojýtė* 'leg-DIM', *lėlýtė* 'doll-DIM', *berniùkas* 'boy-DIM', *šuniùkas* 'dog-DIM', *kiškiùkas* 'hare-DIM'.

Consider in this respect the whole paradigms of the simplicia *akìs* 'eye', *nãmas* 'house' and their diminutives *akýtė* 'eye-DIM:FEM' and *namùkas* 'house-DIM:MASC' where diminutive suffixes are almost always stressed:

Singular

Nom.	*akìs*	*akýtė*	*nãmas*	*namùkas*
Gen.	*akiẽs*	*akýtės*	*nãmo*	*namùko*
Dat.	*ãkiai*	*akýtei*	*nãmui*	*namùkui*
Acc.	ãkį	akýtę	nãmą	namùką
Inst.	*akimì*	*akýte*	*namù*	*(namukù)*
Loc.	*akyjè*	*akýtėje*	*namè*	*(namukè)*

Plural

Nom.	*ãkys*	*akýtės*	*namaĩ*	*namùkai*
Gen.	*akių*	*akýčių*	*namų*	*namùkų*
Dat.	*akìms*	*akýtėms*	*namáms*	*namùkams*
Acc.	*akìs*	*akýtes*	*namùs*	*(namukùs)*
Inst.	*akimìs*	*akýtėmis*	*namaĩs*	*namùkais*
Loc.	*akysè*	*akýtėse*	*namuosè*	*namùkuose*

There is much less change or no change at all (as in *akýtė*) in the diminutives: only in three case forms the stress pattern changes, i.e. *namukù*-DIM:SG:INST, *namukè*-DIM:SG:LOC, *namukùs*-DIM:PL:ACC. There-

fore, the exceptions in the stress pattern of peripheral cases which are acquired later, i.e., Sg. Inst., Loc., Pl. Acc. (Savickienė 2003), are not important at this phase of language acquisition.

It should be mentioned that up to the age of two Rūta had certain problems in pronouncing a longer word correctly. However, in spite of these pronunciation difficulties the diminutive suffix in Rūta's speech has been retained, e.g., *teniùkas* (vandenukas) 'water-DIM', *teniùkas* (sausainiukas) 'biscuit-DIM', *kaliùkas* (auskariukas) 'earing-DIM', *etiùkas* (kamuoliukas) 'ball-DIM', *Týtė, Ūtýtė* (Rūtytė) 'Rūta-DIM' (observed until the age of two, due to the problems of pronouncing [r]).

Thus, a salient feature of Lithuanian diminutives is that they represent word-final trochees, at least in the base form and most case forms, and thus are easily identifiable by a child.

4.4. Inflectional classes. The most important fact in the process of simplification is that diminutives reduce the number of noun classes (see Table 1) with numerous endings and assign them to the masculine gender type of nominative *-as* or *-is*: Macroclass[5] I, microclasses 1 and 3. Nouns of the feminine gender type of nominative -ė occur only within one class, i.e., Macroclass II, microclass 3. Diminutives and hypocoristics only appear in the most productive declensional classes, i.e., I.1, I.3, and II.3. Since class II.1 is more productive than all the other feminine microclasses, but does not participate in diminutive formation (in contrast to microclass II.3), the dichotomy between productive and unproductive classes cannot be identified with a dichotomy between regular and irregular nouns or default and non-default classes.

Table 1

Noun classes with examples

Macroclass	Microclass	Gender	Ending of Sg. Nom.	Example	Rūta's data (tokens in %)
I	**1 (product.)**	masc.	-as	vyras 'man'	35,5%
	2 (unproduct.)	masc.	-ias	kelias 'road'	0,1%
	3 (product.)	masc.	-is, -ys	peilis 'knife'	12,7%
	4 (unproduct.)	masc.	-us	medus 'honey'	0,2%
	5 (unproduct.)	masc.	-ius	televizorius 'TV set'	1,9%
	6 (unproduct.)	masc.	-is	dantis 'tooth'	0,0%
	7 (unproduct.)	masc.	-uo	vanduo 'water'	0,1%
II	1 (product.)	femin.	-a	ranka 'hand'	10,5%
	2 (unproduct.)	femin.	-ia	vyšnia 'cherry'	0,9%
	3 (product.)	femin.	-ė	bitė 'bee'	37,4%
	4 (unproduct.)	femin.	-is	žuvis 'fish'	0,6%
	(isolated p.)	femin.	-uo, -ė	sesuo 'sister'	0,0%

As we saw, diminutives fall only into three, totally productive microclasses: microclass II.3 is reserved for the feminine gender, whereas the other two (I.1 and I.3) encompass masculine nouns (see Table 1). However, one masculine microclass – the most frequent one, with the nominative ending *-as* – is greatly preferred by Rūta. The predominance of this microclass is increased by the frequent use of the diminutive suffix *-uk-* which belongs to this microclass. Rūta simplifies the inflectional system by choosing one default diminutive suffix, *-uk-* for masculine and *-yt-* for feminine; both of them fall under the two most frequent microclasses, e.g., masculine I.1 *šuniukas* 'dog-DIM', *namukas* 'house-DIM', *ežiukas* 'hedgehog-DIM', feminine II.3 *sesutė* 'sister-DIM', *meškutė* 'teddy-bear-DIM', *bitutė* 'bee-DIM'.

[5] On the distinction of Lithuanian noun classes according to the principles of Natural Morphology (Dressler 1994; 1997) see Savickienė (2003).

4.5. Form oppositions or mini-paradigms. The discussion on the development of inflection is related to the noun classes as well as to the case form oppositions. The acquisition of case is considered to be one of the most complicated. This is due to several reasons: first, the category of case is morphological in form and syntactic in content; second, it enters into multiple oppositions.

Data provided by research in other languages (cf. Slavic: Polish, Russian; Baltic: Latvian) demonstrate that children first grasp the existing contrast between the accusative and genitive singular case forms as opposed to the nominative case. Approximately at the same time children start using the vocative, the nominative plural, the locative singular, the dative and the instrumental cases (Smoczyńska 1985; Voeikova 1998; Gvozdev 1949; Rūķe-Draviņa 1973). In addition, research into Slavic languages has shown that, as a rule, plural case forms in child language appear at the beginning of the third year.

The frequency of occurrence (also in percentages) of all cases used in Rūta's and her mother's speech is presented in Table 2.

Table 2

The frequency of occurrence of all cases in diminutive and simplex forms in Rūta's speech (1;7-2;5)

Rūta	Nom.	Acc.	Gen.	Dat.	Ins.	Loc.	Voc.
Simplex	2759 50,9%	960 54,8%	745 54,9%	91 24,6%	110 52,8%	145 85,8%	180 38,5%
Diminutive	2666 49,1%	790 45,2%	610 45,1%	279 75,4%	98 47,2%	24 14,2%	288 61,5%
Total	5425 100%	1750 100%	355 100%	370 100%	208 100%	169 100%	468 100%

The data clearly indicate that grammatical cases, i.e., the nominative, the accusative, the genitive, and the dative are much more frequent (except the dative) than the concrete ones, i.e., those of the instrumental, and the locative[6]. The vocative forms are used quite often as well, but doesn't reach the number of occurrences of concrete cases. It can be concluded then that the sub-system of concrete cases, which is functionally marked, is characterized by a low frequency of occurrence. The frequency of grammatical cases differs greatly from that of concrete ones. For example, the frequency of the genitive case alone is higher than that of all concrete cases taken together. The most frequent case, then, is the unmarked nominative case, whereas the locative and the instrumental represent the cases with the lowest frequency of occurrence. Likewise, the locative case, due to its lowest frequency of occurrence, should be considered the most marked member in the case system.

If we will look to the cases according to their base forms we will observe that all the nouns are used as simplicia or diminutives almost equally (nominative, accusative, genitive, and instrumental). The preference for diminutives is noticed for the dative and vocative cases, and simplicia are used for the locative.

The results also show considerable differences in the use of dative and locative. As far as the use of dative is concerned, the reason for this difference is the fact that the dative is the most likely candidate for the functions of the beneficiary, percipient, or experiencer. The dative performing these functions denotes an animate noun, i. e., a person or an animal. All these nouns are preferred in the diminutive form rather than in simplex and therefore their frequencies are much higher. The use of the locative shows the opposite of the dative. The locative is located in the periphery of the sub-system: the locative appears with animate nouns very rarely and mostly is used in the simplex forms whereas diminutive suffixes are attached not very frequently due to the fact that the primary function of the locative case is to indicate place, which is a prerogative of inanimate nouns.

[6] J. Kuryłowicz did not separate the vocative as a discrete case; therefore we count the vocative case separately from these two groups.

Now, from the general discussion of the case form frequencies, we will turn to the presentation of the first case form oppositions.

According to Bittner, Dressler and Kilani-Schoch (2003), the emergence of noun paradigms in a child's speech marks the starting point of detecting noun morphology. The first mini-paradigms with three contrasting forms in Rūta's data coincide with the beginning of protomorphology[7], i.e. 1;8 (Table 3).

Table 3

Frequency of mini-paradigms in Rūta's speech

Age	2-member mini-paradigm	True mini-paradigm (3 and multi-members)	Total	Total No of noun lemmas	Total No of noun tokens
1;7	-	-	-	15	52
1;8	1	2	3	56	339
1;9	11	9	20	163	1028
1;10	6	14	20	178	1174
1;11	5	6	11	140	863
2;0	9	12	21	126	1000
2;1	4	12	16	160	1010
2;2	6	20	26	156	1118
2;3	6	16	22	179	1158
2;4	7	13	20	190	1168
2;5	12	16	28	191	942

It was observed that diminutives form oppositions develop into 2-3-member mini-paradigms or even into multi-member-paradigms at the very early period of language acquisition (for examples on emergence and development of mini-paradigms see Table 4).

Table 4

Examples of Rūta's mini-paradigms (1;8-1;10)

(The table gives only a few instances of mini-paradigms, and only for the three months, i.e., 1;8-1;10, because the later periods have too many mini-paradigm examples to be presented in a table)

Age	Lemma	Simplex	Category	Diminutive	Category	Translation
1;8	bitė	bitė	SG:NOM	bitutė	SG:NOM	'bee'
	bitę	SG:ACC				
	batas	batai	PL:NOM	batuką	SG:ACC	'shoe'
1;9	katė	katė	SG:NOM	katutė	SG:NOM	'cat'
			katytes	PL:ACC		
			katytė	SG:NOM		
			katytę	SG:ACC		
	mama	mama	SG:NOM	mamytė	SG:NOM	'mammy'
	mamos	SG:GEN	mamytę	SG:ACC		
	mamą	SG:ACC	mamytei	SG:DAT		
	mamai	SG:DAT	mamyte	SG:INS		
	mama	SG:VOC	mamyte	SG:VOC		

[7] For the stages of acquisition: premorphology, protomorphology, morphology proper see Savickienė 2003.

1;10	koja	koja	SG:NOM	kojytės	SG:GEN	'leg'
	kojos	PL:NOM	kojytę	SG:ACC		
			kojytės	PL:NOM		
			kojytėm	PL:DAT		
	arbata	arbatos	SG:GEN	arbatytė	SG:NOM	'tea'
			arbatyte	SG:INS		
			arbatėlę	SG:ACC		

The examples demonstrate that there are more form oppositions in the paradigms of diminutives than of simplicia.

The discussion on the development of case form oppositions should go in the line with the inflectional classes. The first point that deserves to be mentioned is the distribution of classes. It is clearly seen that from the existing microclasses only several occur quite frequently, namely, microclasses I.1, I.3 and microclasses II.1, II.3 (see Table 1). This tendency is manifested throughout the period of observation. Within this particular group microclasses I.1 and II.3 should be noted due to the high frequency of occurrence: they appear three times more often than microclasses I.3 and II.1. Nouns which belong to other microclasses occur very rarely. Nouns of microclasses I.5 and II.2 are used not often, but have a slightly higher frequency of occurrence as compared to those of I.2, I.4, I.6 and I.7. Nouns of isolated paradigm were not attested at all in the period of observation.

The explanation for this phenomenon is related to the use of diminutives; these belong to microclasses I.1, I.3 and II.3. When diminutives are used instead of basic noun forms, there is a switch from one microclass to another, e.g., *šuo* 'dog' (I.7), as compared to *šuniukas* 'dog:DIM', (I.1); *sesuo* 'sister' (II.5), as opposed to *sesutė* 'sister:DIM' (II.3). The most frequent is the diminutive switch to I.1 or II.3. Let us turn now to the discussion of those microclasses which appear in Rūta's speech quite rarely.

The nouns of microclass II.4 are not very frequent (9 types and 55 tokens). The most frequent nouns are *akis* 'eye', *ausis* 'ear', *nosis* 'nose', *žuvis* 'fish'. However, nouns denoting body parts were more often used as diminutives; due to this usage the total number of microclass II.3 nouns has increased. The diminutives of these nouns appear in various case forms: akis 'eye' (30 tokens as diminutive and 5 tokens as simplex) was used in Sg. Nom., Gen., Acc., Loc., Pl. Nom., Gen., Acc.; *ausis* 'ear' (21 tokens as diminutive and 2 tokens as simplex) was used in Sg. Nom., Gen., Loc., Pl. Nom., Acc.; *nosis* 'nose' (30 tokens as diminutive and 7 tokens as simplex) was used in Sg. Nom., Gen., Ins., Loc.; *žuvis* 'fish' (16 tokens as diminutive and 9 tokens as simplex) was used in Sg. Nom., Gen., Ins., Pl. Nom.

The nouns of microclass I.4 *alus* 'beer', *cukrus* 'sugar', *dangus* 'sky', *lietus* 'rain', and *vidus* 'inside' are attested in Rūta's speech, but with a rather low frequency of appearance, i.e., 6 types and 22 tokens. These nouns were used mostly as simplex forms, except for the noun lietus 'rain' which was used as diminutive 3 times.

There are only 3 nouns (3 types and 10 tokens) of microclass I.7, i.e., *ruduo* 'autumn', and *vanduo* 'water' and *šuo* 'dog'. The girl produced *šuo* 'dog' in its simplex form only once. The diminutive form of the noun *šuo* 'dog' appears in Rūta's speech extremely frequently – the total number of tokens is 281. The case form distribution is very wide: Sg. Nom., Gen., Acc., Dat., Ins., Voc., Pl. Nom., Gen., Dat., Ins. It is noteworthy too that *vanduo* 'water' is used as diminutive more often than as a basic form (25 tokens vs. 7 tokens). The noun *vanduo* 'water' in its diminutive form was used in Sg. Nom., Gen., Acc., Ins.

The observation of the nouns belonging to the infrequent microclasses shows not only the preference for the diminutives but also confirm that these derivates are used in many form oppositions.

Results and conclusions

The analysis of our data allows us to draw several important conclusions. Diminutive formation is the first pattern of word formation to emerge. The main reason for this seems to be the pragmatic functions

of endearment, empathy, and sympathy, which make diminutives particularly appropriate for child-directed speech. This is especially true for things belonging to the child's world, which the caretakers tend to refer to using diminutives. The child had acquired both diminutive and simplex forms of the same lemma and had used them without any difference in meaning in the same speech situation at the very beginning of recordings.

An early emergence of diminutive suffixes might be influenced by the transparency and frequency of diminutive morphemes. Morphological richness and productivity, transparency and saliency of diminutives in the input language make the acquisition and development of noun inflectional morphology faster and easier.

We can assume that the acquisition of diminutives simplifies the declensional system and thus facilitates its acquisition. Our results show that in Lithuanian those declensional classes which include diminutives emerge before those classes which do not include diminutives.

It is typical for inflecting-fusional language as Lithuanian to have a variety of both productive and unproductive or transparent and opaque declension classes. Thus a shift from base nouns to diminutives may enhance productivity and transparency, with its consequences for the acquisition of inflection.

No far-reaching generalizations with respect to the acquisition of diminutives can be put forward at this point, due to the fact that the data is analyzed only for one child.

Finally, it looks that diminutives "do something" if they are frequent in the input; then the diminutives may facilitate the acquisition of the declension or show other evidence for simplification. In other languages, although these derivatives are more productive and transparent than base nouns at large, do not play any important role in language acquisition and are used presumably due to pragmatic reasons.

The research on Latvian diminutives in CDS and child language acquisition would provide an interesting data to compare the two Baltic languages and to analyze the strategies of diminutive application in the respective language. Therefore more research is needed in order to establish which features in the process of diminutive acquisition are similar for the Baltic languages, which are language-specific and which just point to some idiosyncratic usage patterns on the part of a particular child.

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