Acquisition of the Russian Case System*

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1. Introduction

I will pursue two goals in this paper: testing the predictions concerning Case made by the lexical-thematic analysis of early grammars and giving a detailed description of the acquisition of the Russian case system. The lexical-thematic analysis has been developed by Radford (1986, 1990) to explain the apparent lack of functional categories and non-thematic elements, as well as movement associated with properties of functional categories, in the speech of children acquiring English. The central claim of the lexical-thematic analysis is that the grammars of children, although constrained by UG at all stages, pass through a stage in which all functional categories are absent and only lexical categories that enter into thematic relations are present. Since (at least structural) Case is checked in theSpecifier position of a projection headed by a functional element, such as AgrS, AgrO, or Det, no Case-checking can occur in a grammar that lacks functional categories. In the lexical-thematic analysis, the Case Filter, that is, the requirement that all nouns be Case-marked (or must check their Case features), is taken to refer to DPs, not NPs, so that it is satisfied vacuously, since child grammars contain no DPs, but only NPs. Thus, there can be no Case-checking relationships in a lexical grammar, and all nouns appearing in children's speech at this stage are predicted to be Caseless.2

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† Similar theories have been proposed in Guilfoyle & Noonan (1988), Lebeaux (1988), and Pfaltzack (1990). However, I will be primarily concerned with the formulation of the lexical-thematic theory given in Radford (1990).

‡ Throughout this paper, I refer to the representation of case within syntax and morphology prior to the application of the morphological Spell-out rules as (abstract) Case, and to the phonological strings that replace the Case.
The claims made by the lexical analysis regarding the absence of Tns, Agr, and Comp in child grammars have been challenged by Wexler (1991), using data from languages that offer more direct evidence of the presence of these elements, than English, such as various Germanic languages that show V2 phenomena. In this paper I will pursue a similar line of logic, examining the acquisition of the Case system in a language that offers better opportunities than English to test predictions regarding Case, namely Russian. The Case Filter, which is assumed to operate universally, states that all DPs must be marked with abstract Case features, appropriately assigned to them, or checked against the Case features of an appropriate element. In Russian, all nominals must bear a morphological realization of their abstract Case features, as well. In English this requirement holds only of pronouns, making direct arguments about the Case status of the majority of the nominals impossible. If children acquiring Russian use morphological case-marking (and, therefore, abstract Case) contrastively and appropriately, their grammars must contain the functional categories that assign or check Case (Agr, Tns, Det), and the projections that make Case-assignment or checking obligatory (DPs), thus showing the lexical analysis to be wrong. Below I will examine the Case system utilized in the natural speech of Russian children, coming to the conclusion that early grammars do contain both Cased nouns and a full array of functional categories. The claim that all nominals in child grammars are Caseless stems from the unfortunate (in this context) linguistic accident that noun stems, Cased nouns, verb stems, and tensed verbs are often homonymous in English.

The process of the acquisition of a morphological case system deserves investigation in its own right, independently of its ability to resolve various theoretical issues. This is especially true for Russian, where all work on Case acquisition can be traced to a diary study of a single child, carried out in the early forties by the child's father (Gvozdev, 1961). This is an extremely shaky foundation for any theory to be built on: while the study is quite thorough, there is no quantitative analysis of the data, which was memorized, not recorded; the analysis is not grounded in any linguistic theory, and the data is all from the natural speech of one child, whose development may have been atypical in any number of ways. Thus, the data presented here should fill a gap in the study of language acquisition. A number of questions can be asked about the exact way the acquisition of a Case system proceeds: are the morphological case markings present as soon as the child starts using the arguments that require the corresponding abstract Case? What does a child do, if the case markings come in after the arguments that require them? Is there a stage, at which only abstract, but not morphological, Case is present? What is the order of appearance of the arguments? What is the order of appearance of the cases? Can the mistakes made in the use of Cases be connected to a particular module of grammar? Do structural, inherent, and quirky Cases receive different treatment? The data in this paper will suggest answers to some of these questions.

The paper is organized as follows. In section 2, I discuss the lexical-thematic features after the application of the Spell-out rules as case-markings. In section 3, I provide the essential facts on the Russian Case system. In section 4, I describe the data analyzed in this paper, and the methods of analysis. In section 5.1 I discuss the two types of nouns appearing in the data that can be analyzed as Caseless: the onomatopoeic and the incomplete nouns, presenting arguments that they do bear Abstract Case. In section 5.2 I examine the distribution of the default Case, which is nominative in Russian, showing that it is used only in those structural positions where it is appropriate. In section 5.3, I examine the distribution of all other Cases, showing that it is adult-like with the exception of two structures, which have been misanalyzed by the children. In section 6. I re-examine the evidence presented in support of the lexical-thematic theory, showing that most of the patterns used to argue for the absence of Case in child grammars occur in the speech of children acquiring Russian, who have mastered the Case system, so that these patterns must be explained in some other fashion. In section 7, I give a brief summary of the facts demonstrated in the paper, their bearing on the claims of the lexical-thematic theory, and the process of language acquisition in general.

2. The Lexical-Theme Analysis and Its Predictions

Concerning Case

Radford has argued that child grammars pass through three stages: 1) pre-categorial stage, characterized by one-word utterances lacking productive use of category-specific inflections (12 - 20 months); 2) categorial lexical stage, characterized by multi-word utterances, productive use of lexical categories, and the absence of functional categories and inflections based on functional categories (20 - 24 months); 3) functional stage, characterized by the acquisition of functional categories, inflections, and properties associated with them (24 - 30 months).

The claims made about the second stage of the grammar's development, the lexical stage, are the ones of interest for this paper. During this stage, children show signs of having acquired lexical categories and their associated grammatical properties and signs of not having acquired functional categories and their associated properties. All structures produced by children at this stage are thematic, i.e. all sister constituents are thematically inter-related, with the head assigning a theta-role to its complement, and the X* assigning a theta-role to its specifier. Since only lexical categories are assumed to enter into thematic relations, only lexical categories (Adj, V, N, P) and their projections are present. Non-thematic categories, that is functional categories (Agr, Tns, Comp, Det), and their projections are absent.

The lexical-thematic analysis is formulated within the general GB framework of Chomsky (1986). The Case Filter is assumed to require all DPs to be Case-
marked, but to have no parallel requirement for NPs - the only nominal maximal projection in children's grammars at this stage. Thus, no nominal needs to bear abstract Case. In this system, nominative Case is assumed to be assigned by Infl to the DP that has moved from the Spec of VP to the Spec of IP for Case reasons and genitive Case is assumed to be assigned to the DP that has moved from the Spec of NP to the Spec of DP for Case reasons. Accusative Case seems to be assigned by a verb to a DP appearing as the verb's complement. Clearly, since Infl and Det (and their projections) are absent, neither the nominative, nor the genitive Case can be assigned. No parallel claim about the accusative Case is made, since it is not assigned by a functional category. However, the formulation of the Case Filter given above is taken seriously, then accusative Case can, but need not be assigned, since the complement of the verb is an NP, not a DP. The structures corresponding to the adult CPs and DPs in child grammars are given in (1a and b), respectively:

1. a. \[ \text{VP} \{ \text{NP Man} \} \{ [v \text{drive}] \{ \text{NP truck} \} \} \]
   b. \[ \text{NP} \{ \text{NP Tiger} \} \{ \text{N} \{ \text{N tail} \} \{ \{ \text{NP} \} \} \} \] (Radford, 1990)

Note the absence of Comp, Tns, Agr, or Det, and the similarity to the small clause structure of the adult grammar.

In my analysis of the data I will adopt the assumptions of the Minimalist framework of Chomsky (1992) with respect to Case. In particular, I will assume that Case features of DPs are checked in the Spec of AgrS, AgrO, and DP against the Case features of AgrS-Tns-V, AgrO-V, and Det, respectively, and that subject-verb agreement is carried out by checking the phi-features of the DP in the Spec of AgrS against the phi-features of the AgrS-Tns-V complex. Since the notions of structural Case - Case assigned to an element in a particular structural position at S-Structure, inherent Case - Case assigned to an element bearing a particular theta-role at D-Structure, and quirk Case - Case assigned by a particular lexical item to its complement at D-Structure, are crucial for a discussion of a complicated Case system, such as that of Russian, I will adopt them here, thus using the notions of D-Structure and S-Structure and departing in this respect form the Minimalist framework. The claims of the lexical-thematic analysis can be translated into an analysis within the Minimalist framework without significant changes: the only assumption that has to be abandoned is the special status that was given to the accusative Case, as a structural Case not assigned by a functional category. Since within the Minimalist framework accusative Case of a DP is checked in the Spec of AgrO against the Case features of AgrO-V complex, it would be predicted to be absent in the early grammars by the lexical-thematic analysis. It is not clear that this slightly modernized version of the lexical-thematic theory is as coherent as the old one: if the functional categories are removed, the Case features of the verbs (and, possibly, other lexical categories) might still need to be assigned.

However, I will not be concerned with the issue of whether the lexical-thematic theory can made consistent with the current linguistic theory, but rather, whether its claims, whatever their theoretical framework, are factually correct. The data discussed in this paper and their analysis are not dependent on a particular syntactic framework, and could have been formulated easily, and with as much force, within GB theory.

Radford uses several pieces of evidence in support of his claim that all nominals used by children during the lexical stage are Caseless. The first has to do with pronouns - the only elements that carry morphological case in English. Radford claims that children either avoid them altogether, because of their status as DPs and the difficulties caused by Case, or use the accusative form of pronouns, which is assumed to be the default one, in all structural positions. Some children use all forms of pronouns (nominative, accusative, and genitive) interchangeably, regardless of which form is appropriate for the position occupied by the pronominal. These patterns are argued to show that the morphological case marking on the pronouns is unanalyzed, that is, does not imply the presence of abstract Case. A second type of evidence is the lack of elements which in adult grammars have only a Case-assigning, but not a thematic function: thus, the Determiner 's is absent in a child utterance (1b), as well as the Case-assigner of, arguably showing that the nominals appearing in the construction are Caseless, and that, since the Case Filter is satisfied vacuously, no element, whose only function is Case-marking, needs to appear in children's speech at this stage. The third piece of evidence depends on a specific analysis of binominal sentences, according to children's speech, which are given the structures in (2 a,b); it is argued that empty categories without a Case-assigning antecedent (the phonologically null V and P in these sentences) cannot assign Case to their complements, so that binominal structures are another pattern, in which, because of the absence of a Case-assigner, all nominals are Caseless. Lastly, children's use of nominals as direct objects of intransitive verbs without prepositions (2c) is taken to demonstrate lack of Case constraints on the distribution of nominals for children, again suggesting that the Case Filter plays no role in their grammars. Thus Radford assumes that where children are not using a phonologically realized Case-assigner it is either altogether absent, or unable to fulfill its Case-assigning function.

2. a. \[ \text{VP} \{ \text{NP Roland} \} \{ [v \text{eat}] \{ \text{NP sweet} \} \} \] (Roland wants a sweet)
   b. \[ \text{PP} \{ \text{NP Mummy} \} \{ [p \text{eats}] \{ \text{NP kitchen} \} \} \] (Mummy is in the kitchen)
   c. \[ \{ \text{Wayne} \} \{ [v \{ [v \text{go}] \{ \text{NP river} \} \} \} \] (Wayne goes to the river)

What are the predictions the lexical analysis makes for the speech of children lexical or functional. However, note that this is a different claim: it does not imply that the functional categories are absent, or say anything about the other features checked by the functional categories. In addition, it is not clear to me in what sense a grammar without any Case-checking could be construed as UG-constrained.

3 It might be possible to formulate of the basic intuition behind the lexical-thematic theory within the Minimalist framework in some other fashion: for instance, by claiming that no Case features are present for any category,
learning a language that requires all nominals to carry a morphological realization of abstract Case. Although no explicit predictions are given by Radford, I think the following three patterns, closely resembling the analysis of pronouns in the speech of children acquiring English, are the only ones consistent with this theory: one possible pattern is the use of the default Case in all syntactic environments (the case-marking would be argued to be unanalyzed and non-contrastive for the children); another possible pattern is the use of all Case-marked forms interchangeably without regard for the structural position of the nominals (the case-markings would again be argued to be unanalyzed); the final possibility would be for the children to use truly Caseless forms, that is, noun stems lacking the Case morpheme and any morphological realization it might have.

Crucially, the lexical analysis does not make the claim that functional categories, analyzed as such, are never used by children, only that all children go through a stage where this is the case. The strongest counterexample to this claim as it relates to Case would be to show that children use Case-marked nominals productively, contrastively, and appropriately at all points after the pre-categorical (one-word) stage. Note that it is assumed that children's grammars are UG-constrained even at the lexical stage, that is, that if children are using Case-marked nominals contrastively and appropriately, they are employing the same Case-marking mechanisms as adults. Thus, the evidence I will present below will not be aimed at disputing the claim that children are using some Case-marking strategy radically different from that of adults. It should also be noted that the claims about the development of early grammars made by the lexical-thematic theory are intended to hold universally, so that, while it would perhaps be consistent with the spirit of the theory to claim that the lexical stage may occur at different stages of grammatical development in different languages, it is predicted to occur in all of them, regardless of their syntactic and morphological properties.

3. Some Facts about the Russian Case System

3.1. The Mechanisms of the Morphological Realization of Abstract Case

For concreteness, I will adopt the model of the morphological component of the grammar and its handling of Case developed by Halle (1993). In it, a nominal enters the morphological module of grammar from S-Structure as a group of unordered hierarchically organized constituents, the unit that has been formed as a terminal constituent by the derivation of the sentence (e.g. [[[vocabulary item] [derivational suffix]] [plural] [nominative case]]). The Word Synthesis component then operates on the nominal to make it conform to the template of the units that Morphology and Phonology deal with, which in Russian is the following: vocabulary item + Theme + inflection. The constituents receive a linear ordering, a semantically inert Theme vowel is added to nominal, verbal, and adjectival stems, and such syntactically independent morphemes as number and Case are fused into one inflectional affix. In addition, the Word Synthesis Component contains redundancy rules, which supply the gender and declension features to those stems, for which these features are predictable, and thus, not specified in the Lexicon. The Readjustment rules change the stem and the Theme vowel or add phonological elements for those items that require it in particular morphological environments. Finally, the Spell-out rules replace the abstract Case and number morpheme with the phonological realization appropriate for the declension of the stem. The resulting nominal is operated on by the Phonological module, which can change the phonological shape of the nominal significantly: the first of two adjacent vowels is deleted, the abstract vowel Yer is either deleted or realized as iel or iol, some consonants are palatalized, etc. As this brief sketch shows, the complexity of the process of Case realization is quite formidable.

There are six abstract Cases in Russian - nominative, accusative, genitive, dative, instrumental, and prepositional, with remnants of two other Cases, partitive and locative, which have distinct case markings for a limited number of lexical items, and are identical to genitive and prepositional, respectively, for the rest. Vocative, often used by children, is identical to nominative, with the last vowel of the word optionally omitted. Russian nominal stems belong to four declension classes, some of them predictable from the gender of the stem (the 1st declension is mostly feminine, the 2nd - exclusively masculine and neuter, the 3rd - exclusively feminine, and the 4th - mixed); some stems are specified only for gender in the Lexicon, others only for declension, and only a minority both for gender and declension. The declension class determines which phonological realization the theme vowel and the [Case = number] ending are given. The case markings for the four declensions (that is, the combinations of the theme vowels, consonants inserted by the readjustment rules, and the endings supplied by the spell-out rules, in the form they take after the phonological component has operated on them) are given in Table 1:

5 Note that a word-final abstract vowel Yer is always deleted, although it can leave evidence of being present in the underlying representation. Thus, the 0 endings given in Table 1 correspond to the underlying abstract vowel Yer. There is also a word-final Yer in those case-markings that phonetically end in a consonant.
Maria Babyonytshev

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Table 1.

The fourth declension contains foreign words of all genders which have phonological form that cannot be analyzed as the combination of a stem and an ending of one of the other three declensions (for instance, masculine nouns ending in a vowel, feminine nouns ending in a non-palatalized consonant). Note that Halle has argued that the noun stems belonging to the first, second, and third declension are specified as [+D] in the lexicon, that is, as having a declension specification, as all nominals of the native Russian vocabulary do, and nouns belonging to the fourth declension are specified as [-D], that is, as not having a declension specification, being "declensionless". The [-D] stems fail to undergo any of the Readjustment rules, which make reference to the declension class of the stems to which they apply, and any of the Spell-out rules, except the default one, which does not have an environment of application, simply applying to all the stems to which no other Spell-out rule could apply. The default Spell-out rule realizes a [Case + number] morpheme as the abstract vowel Yer, which is later deleted in this word-final position.

Finally, adjectival and verbal stems are operated on in a similar fashion by the Morphological Module of the grammar, so that the forms that appear in a sentence are unambiguously verbal, adjectival, nominal, or adverbal, and always carry a category-specific inflectional ending specifying such information as gender, number, tense, person, Case, and animacy. The pronominal case paradigm differs from the nominal one, resembling the case paradigm of adjectives.

3.2. The Environments of Case-marking

The subject of a sentence, that is, the DP occurring in the Spec of AgrS at S-Structure, bears nominative Case; the direct object, that is the DP occurring in the Spec of AgrO at S-Structure, bears accusative Case (3). Nominative and accusative Cases are widely assumed to be structural, i.e. assigned at S-Structure to an element in a specific position, independently of its thematic relationship to any other item in the sentence.

3. Acquisition of the Russian Case System

3.1. Acquisition of the Russian Case System

3. Mama ubrala knigu.
   'My mother put the book away'

The "quirky case" verbs can violate this general case-marking pattern, assigning other Cases to the elements that are their complements at D-Structure (4). These verbs subcategorize for items marked with a specific lexical Case, and since the subcategorization frame has to be satisfied at D-Structure, lexical case-marking has to be present there, before structural Cases are assigned, and, thus, overrides them.

4. Petja rukovodit nasej gruppoj
   Petya-m-sg-nom lead-3rd-sg our-f-sg-inst group-f-sg-instr
   'Peter is leading our group'

Accusative Case functions as a lexical Case, as well, when it appears on the complements of prepositions (5).

5. a. Ja upal na pol
    I-nom fell-pst-m-sg on floor-m-sg-acc
    'I fell on the floor'

Genitive Case is assigned to nominals appearing as complements of nominal elements, that is, Nouns and Quantifiers. Babby (1987) has given persuasive arguments that adnominal genitive, assigned to the complements of nouns, is a structural Case in Russian: it is not dependent on the theta-relationship of the complement and its head noun, which can be absent (6a), and it is overridden by lexical Cases, which, unlike structural Cases, are assigned at D-Structure (6b).

6. a. mestnost' prologo leta
    area-f-sg-nom last-n-sg-gen summer-n-sg-gen
    'area of last summer' (a book title)

b. rukovodstvo nasej gruppoj
   leadership-n-sg-nom our-f-sg-gen group-f-sg-gen
   'the leadership of our group'

These arguments also apply to genitive of quantification, which appears on the complements of some adverbal quantifiers and numerical quantifiers larger than 1 (7a, b)7. It is assigned at S-Structure, rather than at D-Structure, as inherent

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6 I use the following abbreviations: sg - singular; pl - plural; nom - nominative; acc - accusative; gen - genitive; dat - dative; prep - prepositional; instr - instrumental; part - partitive; pst - past; pres - present; f - feminine; m - masculine; n - neuter.

7 There is a further complication in the case pattern found within numeral phrases: the complements of numerals 2, 3, and 4 bear the genitive singular
and lexical Cases are: thus in (7c), where the numeral phrase occurs in an environment of a lexical Case, the quantified nominal appears in the lexical Case, not in the genitive.

7. a. Piat' studentov prisla v klass
class
five-nom student-m-gen-pl come-pst into class
'Five students came to class'
b. Piat' studentov prisli v klass
class
five-nom student-m-pl-gen come-past-pl into class
'Five students came to class'
c. Vanja rukovodit pija v studentami
Vanja-m-nom-sg lead pres-3rd-sg five-instr student-m-instr-pl
'Vanja is leading five students'

The quantificational structures exhibit a further complication, which is relevant for their analysis in child grammars. Russian presents conflicting evidence about the status of quantifiers: for instance in (7a) the quantifier seems to act as a head, triggering agreement on the verb, which appears in the default neuter singular form; in an identical environment in (7b) the quantifier seems to act as a specifier of the quantified noun, not triggering agreement on the verb, which then agrees with the quantified noun, appearing in the plural form. Most analyses of quantificational structures follow Pesetsky (1982) in assuming that two structures are available for them: one with Q as a head and the quantified nominal as a complement (exemplified in (7a)) and one with the quantified nominal as a head and the quantifier as its specifier (exemplified in (7b)). Note that when the quantifier is acting as a head, the assignment of genitive Case to its nominal complement is not exceptional in any way, but when the quantifier is acting as a specifier, the assignment of genitive Case to the nominal head must be exceptional in some way, and, probably, highly marked.

Pesetsky (1982) has argued that the two other structures in which genitive Case is assigned - under negation and in the partitive construction - are also instances of quantification, involving phonologically null quantifiers. Then the nominals appearing in these constructions receive structural genitive Case, just as nominal complements of other quantifiers. In negated sentences Neg licenses, but does not require, the appearance of a null quantifier, which assigns genitive to its nominal complement. Descriptively, any nominal that occurs under the VP and, thus, in the scope of negation, at D-Structure can optionally appear in the genitive Case. This includes direct objects of transitive verbs (8a), subjects of unaccusative verbs (8b), and nominal time adjuncts (8c). Note that like other structural Cases, genitive of negation can be overridden in the environments of lexical Cases, assigned at D-Structure (8d), and that, unlike inherent Cases, it is not dependent on a theta-relationship with any element (8e). The subjects of the negated verb est' - 'be' - must always appear in the genitive Case (8e).

8. a. Ja ne videl nikakoj knigi
I-nom not see-pst-m neg-any-kind-f-gen-sg book-f-sg-gen
'I did not see any book'
b. Nikakih posylok ne prihodilo.
no-parcel-ppl-gen not come-pst-sg-a. neg
'No parcels came'
c. I ne spal ni sekundy
I not sleep-pst-sg-m neg second-f-sg-gen
'I didn't sleep for a second'
d. On ne rukovodit nikakoj gruppoj
he-nom not lead-pres-3rd-sg not-any-kind-f-sg-instr group-f-sg-instr
'Vanya does not lead any group'
e. Vanja tu netu
Vanya-m-sg-gen here is not
'There is no Vanya here'

In the partitive construction a phonologically null quantifier, with the meaning 'some of', assigns structural genitive Case to its nominal complement. Descriptively, any mass noun direct object can appear with the genitive case-marking and partitive interpretation (9 a, b). A few lexical items have a special partitive case-marking, distinct from the genitive case-marking (9b).

9. a. Ja xoci vina
I-nom want-pres-1st-sg wine-n-sg-gen
'I want some wine'
b. Ja xoci caju
I-nom want-pres-1st-sg tea-n-sg-part
'I want some tea'

The genitive Case appearing on the complements of prepositions (10 a, b) is a lexical Case, predictable neither from the structural position, nor from the theta-role of the nominal that bears it. The most common construction involving lexical genitive Case is the possessive sentence, which corresponds to the English 'X has Y' construction, and has the possessor DP as an object of the preposition 'at' (10b).
b. U Peti est' kniga at Petya-m-sg-gen is book-f-nom 'Peter has a book'

Dative Case, which appears on goals (11a), benefactive arguments, subjects of some psych verbs, subjects of some modal-like words expressing obligation, permission, ability (11b), and subjects of some adverbs that indicate physical or mental state of the subject, is usually analyzed as an inherent Case, assigned at D-structure to nominals bearing the theta-roles of goal, benefactive, or experiencer.


b. Mne mozno eto delat' I-dat allowed this-acc do-inf 'I am allowed to do this'

c. Ja videl eto peredacu po televizoru I-nom see-pst-sg this f-acc program-f-acc on TV-m-sg-dat 'I saw this program on TV'

In addition, dative Case, much as genitive and accusative Case, can function as a lexical Case, appearing on complements of various prepositions, which do not assign the goal theta-role (11c).

Instrumental Case functions as an inherent Case when it appears on instruments or agents of passive sentences (12a). It functions as a lexical Case, when it appears on complements of prepositions (12 b).

12. a. Petja byl pobit kamnjami / Vanej Petya-m-sg-nom be-pst-m beaten-m stone-instr-pl / Vanya-instr-m-sg 'Peter was hit with stones by Ivan'

Prepositional Case can function only as lexical Case, appearing on the complements of many prepositions (13).

13. a. Eto kniga o Pete This-n-sg-nom book-f-nom about Petya-m-sg-prep 'This is a book about Peter'

The prenominal possessors appear in a possessive form (14 a,b), created by adding a special possessive suffix to a nominal stem, followed by a case-ending taken from the adjectival, rather than the nominal, paradigm.


b. Tvoj zurnal samyj interesnyj Your-sg-m-nom magazine-sg-m-nom most-m-sg-nom interesting-m-sg-nom 'Your magazine is the most interesting one'

As the examples above show, Russian possessors exhibit adjectival agreement with the head noun, copying the head noun's Case and phi-features, rather than bearing an invariant Case, assigned to elements appearing in their structural position, as possessors in English do. In other words, they act as adjectives in morphology. However, as I have argued in Babyonyshev (1993), the possessors are nominals in syntax: they can function as antecedents of pronouns and reflexives, bear a theta role assigned by the head noun, and appear in coordination structures with nominals, all of which is impossible for adjectives in Russian. The possessor nominals are base-generated in a Caseless position of the Spec of NP and undergo head movement to incorporate into the adjectival possessive Determiner to escape the Case Filter. Movement of the whole DP containing the possessor to the Spec of the possessive Determiner is not possible in Russian, since the Russian possessive Determiner is not a Case assigner. Since the possessive are nominals at D-Structure, which undergo head movement for Case reasons, their analysis in child grammars can give evidence of the status of the Case Filter there.

Nominative is the default Case in Russian: it is used in vocatives, left-dislocated phrases, nominal and adjectival predicates, and one-phrase utterances which cannot be construed as elliptical. If an utterance can be construed as elliptical, the noun appearing in it carries the Case it would carry in the complete sentence.

Finally, all lexical items occurring above the X' level of a Noun Phrase or in a Determiner Phrase agree with the head noun in number, gender, and Case. This is the case for adjectival modifiers, possessive nominals, and non-adverbal quantifiers. Such items are usually assumed not to have inherent phi-features, and not to bear Case features in syntax, but to receive them via the process of Noun-Adjective Concord in the Word Synthesis component of Morphology, which copies the Case and phi-features of the head noun onto these elements.

3.3. What Adults Must Know to Case-mark Appropriately

Let us consider the minimal knowledge necessary for an adult speaker of Russian to provide a noun with an appropriate case-ending. The knowledge necessary to assign the appropriate abstract Case marking is the following: the S-Structure of a sentence (does the element occur in the Spec of AgrS or AgrO?); the D-Structure of a sentence (Is the element in an environment where inherent Case is assigned?); the correspondences between structural positions and abstract Cases
does the DP in Spec of AgrS receive nominative case?; the correspondence between theta-roles and inherent Cases (should a goal bear dative or genitive Case?); the lexical properties of the Case-assigners (does the verb assign genitive Case to its object? Does the preposition assign dative Case to its complements?).

Full mastery of the Morphological module of the grammar and some information about the lexical entries of the nominal stems is required to assign appropriate morphological realisation to the abstract Case morpheme. Some of what the speaker must know is the following: the gender of some noun stems, for which the declension specification is supplied by the redundancy rules, and the appropriate redundancy rules (are feminine nouns, unspecified for declension, in the 1st or 2nd declension?); the declension of some noun stems, for which the gender specification is supplied by the redundancy rules, and the appropriate redundancy rules (are 3rd declension nouns feminine or masculine?); the readjustment rules and the classes of stems that are marked to undergo them (does this stem change in the environment of the genitive Case? what is the realisation of the Theme vowel for 2nd declension nouns in the accusative Case?); the spell-out of each abstract Case for each declension paradigm (is the genitive plural ending for 1st declension nouns -i or -y?); the ordering of the Spell-out rules (which rule is the default one?).

Finally, the speaker must have the pragmatic knowledge necessary to determine whether the hearer will be able to compute the complete utterance corresponding to an elliptical utterance actually pronounced, based on the linguistic and situation context. This is a complicated computation that requires both knowledge of the world and knowledge of the grammar of one's language.

In what follows I will be asking how much of this knowledge has to be assumed to be present in the child grammars, for the utterances attested to be generated.

4. The Data and the Analysis

The paper is based on the analysis of the natural speech data of two monolingual Russian children, Andrei and Peter, who were 2;1 and 1;6 respectively when the recordings began. The recordings continued for six months; they were carried out in weekly hour-long sessions. The transcripts are accompanied by the descriptions of the context of the child's utterance (pointing to objects, accompanying gestures, accompanying actions, etc.). The transcripts contain only the children's speech - the experimenter's speech is recorded only occasionally, if it provides relevant context.

For the first child, 26 sessions were conducted, taking him from the age of 2;1 to the age of 2;7. For the second child, 19 sessions were conducted, taking him from the age of 1;6 to the age of 2;0; no sessions were conducted at 1;11.

In analyzing these data, I considered all lexical items that carry nominal inflection in adult speech to be nouns. I also included pronouns, which are arguably Dets and use non-nominal case paradigms, and possessive forms of nouns and pronouns, which are clearly derived from nominal stems, and occupy a nominal position - the Spec of DP - in most languages. I have excluded adjectives from consideration to limit the focus of the study. Recall that adjectives derive their case-marking via a process of noun-adjective agreement within the Word Synthesis component of morphology, and do not carry abstract Case features in syntax. Free-standing demonstratives and numerical quantifiers, which carry nominal inflection, are considered as nouns here. I have also counted the onomatopoeic words occurring in the corpus as nouns, when they occurred in the nominal (Case-marked) positions, from which all other categories are excluded.

In trying to decide whether a given instance of a case-marked noun was used appropriately, I considered whether the utterance in which it appeared could be used by an adult speaker of Russian with the same intention. Thus, in many instances where an utterance is elliptical or contains only one word, it was counted as correct if an adult could have used such an utterance with the intention indicated by the experimenter. For instance, if a child uttered (15) as a request, it was considered correct:

15. a. Moe caju
   1-dat tea-m-sg-part
   'Give me tea'

15. b. caju
   tea-m-sg-part
   'Give me tea'

Both (15a) and (15b) are possible adult utterances in the context, where it is clear that a request is being made. There were some instances, where one-word nominal utterances did not have sufficient context to determine whether the usage of a case marking was appropriate or not. For instance, while playing with the experimenter, a child could utter (16):

16. Moe
   1.dat
   '(Give it to me'

This is a plausibly appropriate utterance - the child could be asking for the experimenter to give him some object. However, it is impossible to tell whether that was the intention or not. I chose to consider such utterances correct - another alternative would have been to only consider those utterances, in which context,

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8 Note that I did not impose the stricter requirement that the utterance be used both with an appropriate intention and in the appropriate context - many of the elliptical utterances of the children appear without sufficiently rich context to be appropriate in adult speech.
whether linguistic or situational, makes the appropriateness of the utterance completely unambiguous. In my analysis I will note the number of instances, in which a plausibly correct one-word utterance was used without sufficient context to determine whether it was, in fact, correct.

Note that in analyzing the data, I was forced to take the morphological case-marking as direct evidence of the underlying abstract Case of the nominal. That is, many of the children's mistakes could have been made because of errors in computing which declension a noun stem belongs to, or which phonological string corresponds to a particular Case in a given paradigm, but they were all analyzed as errors in the assignment of abstract Case.

The first recordings capture the children in the one-word utterance stage, the precategorial stage, according to Radford, during which children are not supposed to know which categories lexical items belong to, and not to be able to use category-specific inflections correctly. The final recordings capture children at the stage of productive use of multi-word utterances, with fully inflected lexical items, that is, at the functional stage. Therefore, the children have to go through the lexical stage during the recorded sessions. The predicted time of this stage is the early point of their use of multi-word utterances. I will provide an analysis of the chronological development of the children's use of each Case, so that the existence of the lexical stage cannot be obscured by the children's later, correct use of Case.

Finally, if a particular case-marking in a given structural position occurs only with one nominal, or only with one Case-assigner, I will not assume that the mechanisms responsible for it in the adult grammar are in place for the child, but will provide alternative explanations for its occurrence.

### 5. The Cases Used by Children

The corpus I have examined contained 861 instances of nouns. (607 for Andrei and 254 for Peter). The numbers of attested case-markings are given in Table 2.

<table>
<thead>
<tr>
<th>Cased:</th>
<th>Andrei</th>
<th>Peter</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominative</td>
<td>428</td>
<td>198</td>
<td>626</td>
</tr>
<tr>
<td>Accusative</td>
<td>6</td>
<td>27</td>
<td>33</td>
</tr>
<tr>
<td>Genitive</td>
<td>13</td>
<td>12</td>
<td>25</td>
</tr>
<tr>
<td>Dative</td>
<td>35</td>
<td>3</td>
<td>38</td>
</tr>
<tr>
<td>Possessive</td>
<td>17</td>
<td>3</td>
<td>20</td>
</tr>
<tr>
<td>Prepositional</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Instrumental</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Bare Stems</td>
<td>108</td>
<td>8</td>
<td>116</td>
</tr>
<tr>
<td>Onomatopoedic</td>
<td>58</td>
<td>1</td>
<td>59</td>
</tr>
<tr>
<td>Incomplete</td>
<td>50</td>
<td>7</td>
<td>57</td>
</tr>
</tbody>
</table>

**Table 2**

### 5.1 Caseless Nouns?

Recall that one of the possible instantiations of the claim that child grammars contain Caseless nouns in a language with obligatory morphological realisation of abstract Case would be to find noun stems appearing in the speech of children in the positions that require Cased nouns in adult grammar. In this case, children could be argued to be using the strategy of avoidance - not using the elements that are not generated by their grammar. Below, I will examine the two types of nominals exemplified in the data that can be interpreted as bare noun stems: the 116 instances of the incomplete nouns and the onomatopoetic nouns.

As Table 2 shows, there were 57 instances of incomplete nominals in the data. All words, in which some phonological material including all or part of the ending was omitted, were considered incomplete. If nominals are incomplete because of the strategy of avoidance, we expect to see case endings being omitted uniformly and exclusively. Both expectations are not confirmed: first, there are at least as many cases of omission of material other than the case ending (or even a morphological or syllabic unit), as of omission of case-endings. Some typical examples of incomplete words are given in (17).
17. a. esce bozja kovka (Andrei, 2;3)
esce bozaja korovka
another god-adj-f-sg-nom cow-dim-f-sg-nom
'mother lady bug'
b. jako (Andrei, 2;3)
jabloko
apple-m-sg-nom
c. et vani mu-u (Andrei, 2;7)
this-n-sg-nom Vanya-gen-sg-m moo
eto Vanya korova
this-n-sg-nom Vanya-pass-f-sg-nom cow-f-sg-nom
'This is Vanya's cow'
d. adi (Andrei, 2;2)
odin
one-m-sg-nom
e. ne na (Pjotr, 1;7)
ne nado
not necessary
'Don't'

In (17a) a part of the stem of the noun is omitted, while the case ending remains (note that a part of the stressed syllable is omitted here). In (17b) a part of the stem is omitted, as well. In (17c) the case ending is omitted. Often, the word as it is pronounced by the child is unambiguously inflected, even though a portion of the ending has been omitted, as in (17 d), where the word pronounced could only be part of the complete nominative form of the word, since a phonological rule deletes the stem vowel in all other Case forms. Also note that other parts of speech are often "reduced", among them the uninfl. categories, such as adverbs, negation particles, and modals (17 e). Thus, the process of omission of phonological material is not confined to case-endings for nomininals, or even to the categories that require Case.

Second, children use nouns with morphological case marking most of the time at all stages. As Table 3 shows, there is no point, at which only incomplete nouns are used. Curiously, the younger child, Peter, has very few incomplete forms of nouns, again suggesting that omission of some phonological material is not due to incomplete acquisition of the Case system (his Case system should be the more rudimentary one).

Table 3

<table>
<thead>
<tr>
<th></th>
<th>1.6</th>
<th>1.7</th>
<th>1.8</th>
<th>1.9</th>
<th>1.10</th>
<th>1.11</th>
<th>2.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peter</td>
<td>1</td>
<td>5</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>incomplete</td>
<td>9</td>
<td>13</td>
<td>29</td>
<td>23</td>
<td>31</td>
<td>0</td>
<td>149</td>
</tr>
<tr>
<td>total</td>
<td>10</td>
<td>84</td>
<td>162</td>
<td>65</td>
<td>87</td>
<td>94</td>
<td>105</td>
</tr>
</tbody>
</table>

Given the patterns described above, omission of phonological material cannot be the result of a strategy of avoiding case-marking. Since this process affects units that are not morphologically, syntactically, or even phonologically, definable, it is much more plausible that it reflects faulty performance on the part of the children, rather than faulty competence. In a few cases where omission of phonological material is consistent for a period of time, it could also be argued to be an instance of an incorrect phonological representation in the lexical entry of an item. Thus, all incomplete nomininals for Peter are tokens of only two lexical items, whose form is always the same for him, until he begins using the full form of the words at 1;9.

The second class of nomininals that can be argued to be Caseless are the onomatopoeic nouns, 59 instances of which occur in the data. Onomatopoeic nouns can be analyzed as Caseless because they carry no overt case-marking, that is, their phonological shape is identical in all structural positions. Onomatopoeic words appear in nominative, accusative and genitive environments, and some onomatopoeic verbs are used, as well:

18. a. zdes' netu, mur netu (Andrei 2;5)
here no, mur-0-case no
zdes' netu, koski netu
here no, cat-gen-fem-sg no
'there, there is no, there is no cat'
b. i u menja est' din-don (Andrei 2;5)
and at 1 gen is ding-dong 0-case
i u menja est' kolokočik
and at 1-gen is bell-m-sg-nom
'I have a bell, too'
c. mne bi-bi (Andrei, 2;2)
I-dat bi-bi 0-case
mne masinu
i-dat car-aoc m-sg
'(Give) me a car'

Throughout this paper I will give children's utterances followed by the correct (adult) versions of the same utterance, if any element in the utterance would be different for an adult. Wherever the second version of the child's utterance is not provided, it can be assumed to be correct.
Acquisition of the Russian Case System

b. Ja bax i Sloan bax. (Andrei, 2;4)
  I-nom bax-0-infl and elephant-nom bax-0-infl
Ja upal i Sloan upal.
I-nom fall-m-sg-pst and elephant-m-sg-nom fall-m-sg-pst.
'I fell down and the elephant fell down'

c. Mam, tvoja gav (Andrei, 2;5)
  mother-f-sg-voc, your-posf-sg-nom gav-0-case
mam, tvoja sobaka
mother-f-sg-voc, your-posf-sg-nom dog-f-sg-nom
'Mom, this is your dog'

The gender and number features of all onomatopoeic nominals appearing in the data correspond to the gender and number features of the standard lexical items with the same reference.

Given that it can be shown that Agr and Tns are present in the sentences in which onomatopoeic nominals occur, these nominals must be assumed to bear Case, just as any other nominal occurring in a sentence with Tns and Agr: Tns and Agr have to check their Case features against a DP for the derivation to converge. Thus, the onomatopoeic nouns are marked with abstract Case, as the constructions, in which Case is copied from them onto other elements (19c), confirm. The puzzling property of onomatopoeic nouns, then, is that their abstract Case is not realized morphologically, in contrast to all other nouns.

I would like to propose that it is, and that the onomatopoeic nouns are analyzed by children as belonging to the 4th declension. Recall that for adults (who do not use onomatopoeic nominals) foreign words of all genders fall into the 4th declension if they cannot be analyzed as a combination of a stem and a case ending of some other declension. The non-native words in the lexicon, which lack a specification for a declension class (or are marked as [-D]), as in Halle's system, do not meet the environment of any of the Spell-out rules, and, therefore, are operated on by the default Spell-out rule, which realizes any abstract Case morpheme as the vowel /e/, subsequently omitted. Thus the declension pattern observed for onomatopoeic words is actually the expected one, if the children's Spell-out rules are identical to those of adults, and the onomatopoeic nouns are unspecified for declension. In effect, this analysis states that children have the 4th declension class of nominals, even though the lexical items that belong to this declension for adults are rather rare in the speech of children and their care-takers. An additional piece of evidence for this analysis is that the forms of onomatopoeic nominals are perceived as correct (that is, correctly Cased) by adult native speakers of Russian.

I will not include onomatopoeic nouns in my analysis of Cased nominals, so that all of the nominals I consider Cased carry adult-like morphological case-marking, which cannot be argued to be absent.

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Maria Babayonysheva

d. Djadju, mam, cik-cik (Andrei 2;7)
  man-m-sg-acc, mom-voc, chuk-chuk.
Djadju, mam, ubili
  man-m-acc-sg, mom, killed-3rd-pl-pst
'They killed the man, mom'

Onomatopoeic nouns, just like incomplete nouns, are always a minority in children's speech: fully inflected nouns appear alongside onomatopoeic nouns at all stages and in all Case environments (see Table 4). They also persist into the later stages of the grammar's development, when all morphological cases are abundant for the children. Thus, it cannot be argued that onomatopoeic nominals appear in children's speech as a result of their grammars not having the mechanisms of Case-assignment - these mechanisms are operating at the same stages with respect to all other nouns.

<table>
<thead>
<tr>
<th>Peter</th>
<th>1</th>
<th>1.7</th>
<th>1.8</th>
<th>1.9</th>
<th>1;10</th>
<th>1;11</th>
<th>2;0</th>
</tr>
</thead>
<tbody>
<tr>
<td>onomatopoeic total</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>149</td>
</tr>
<tr>
<td>Andrei</td>
<td>9</td>
<td>13</td>
<td>29</td>
<td>23</td>
<td>31</td>
<td>0</td>
<td>149</td>
</tr>
<tr>
<td>onomatopoeic total</td>
<td>2</td>
<td>1</td>
<td>2.2</td>
<td>2.3</td>
<td>2.4</td>
<td>2.5</td>
<td>2.6</td>
</tr>
<tr>
<td>Andrei</td>
<td>1</td>
<td>7</td>
<td>1</td>
<td>1</td>
<td>16</td>
<td>11</td>
<td>11</td>
</tr>
<tr>
<td>onomatopoeic total</td>
<td>10</td>
<td>84</td>
<td>162</td>
<td>65</td>
<td>87</td>
<td>94</td>
<td>105</td>
</tr>
</tbody>
</table>

Table 4

A weaker version of the idea that the use of onomatopoeic words is due to the absence of functional categories, and, thus, Case, in children's grammars is that functional categories may be optional, so that the sentences that contain fully Cased nouns have them, and the sentences that contain onomatopoeic nouns do not. However, this turns out to be untenable, as well: if Agr and Tense are absent in a given sentence, we expect all lexical items whose features must be checked against Agr and Tns to appear without the morphological realisation of these features. However, in the sentences where this prediction is most readily testable, i.e. sentences with an onomatopoeic subject and an agreeing verb, we find the opposite pattern - the verb agrees with the subject, showing that AgrP is present in these sentences (19a). Conversely, in sentences with an onomatopoeic verb and a standard lexical subject, the subject is fully inflected with nominative Case, showing that both AgrP and TP occur in the sentence (see 19b). When an onomatopoeic nominal acts as a head noun of a noun phrase, the elements occurring as its specifiers and modifiers are fully inflected for Case, number, and gender (recall that for these elements Case and phi-features are copied from the element in the head position) (19c).

19. a. Da, mjav visit (Andrei, 2;6)
  Yes, meow-0-case hang-pres-3rd-sg
Da, koska visit
  Yes, cat-f-sg-nom hang-3rd-sg-pres
'Yes, a cat is hanging'
5.2. Nominative Case

The second possible instantiations of the claim that all nouns are Caseless in child grammar would be to find all nouns appearing in the default Case, regardless of their syntactic environment. Recall that Radford argued that nominative Case was absent for children acquiring English at the lexical stage, because it is assigned by AgrS, a functional category, and that accusative Case appeared in its place, presumably, either because it is assigned by verbs, a lexical category, or because it is the default Case in English. The former claim is not tenable in the Minimalist Framework, since accusative Case is assumed to be assigned by AgrO, in a manner exactly parallel to the assignment of nominative Case. The latter claim is tenable, and in a more explicit form states that the children's lexical entry for a nominal, that is, a nominal stem, is the accusative form of the nominal. Other notions of default Case are possible, but I think this is the only one consistent with the spirit of the lexical-thematic theory, which claims that neither the abstract Case morphemes, nor the morphological mechanisms responsible for their realization are part of child grammars.

This claim could be made for Russian, with one (rather major) revision: nominative Case would have to be analyzed as the default Case, corresponding to the children's lexical entry for the noun stem. Only the nominative Case in Russian meets the standard criteria for being the default Case: it appears on the nominals that do not have a Case-assigner - the left-dislocated nominals, vocatives, one-phrase nominals, and nominal predicates - and it is never a lexical Case, assigned by a specific lexical item to its complement at D-Structure. Note that a nominal bearing the default Case does not necessarily undergo the default Spell-out rule. Thus, nominals appearing in one phrase utterances will be marked with the default Case feature - nominative, but this Case feature may be realized as a variety of case-endings, depending on the declension class of the nominal stem.

The claim that the default case is used in all structural positions may appear plausible at first glance: there are 626 instances of nominative case-marking on nouns in the data, out of 745 instances of Cased nouns. However, the vast majority of the nominals bearing nominative case-marking appear in the positions where nominative Case is assigned in adult grammars.

<table>
<thead>
<tr>
<th>Acquisition of the Russian Case System</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominative environments</td>
</tr>
<tr>
<td>--------------------------</td>
</tr>
<tr>
<td>404</td>
</tr>
<tr>
<td>405</td>
</tr>
<tr>
<td>70</td>
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<td>6</td>
</tr>
<tr>
<td>14</td>
</tr>
<tr>
<td>0</td>
</tr>
</tbody>
</table>

Table 5.

Recall that nominative Case is the appropriate one for subjects, vocatives, one phrase utterances that cannot be construed as elliptical, and predicate positions. As the table above shows, there were only 3 instances where another morphological case was used in a position, for which nominative was appropriate. Andrei uses accusative in place of vocative, i.e. nominative (20 a); Peter uses genitive in place of nominative in one-phrase utterances twice (20 b).

20. a. Na Vanjaku...... Na Vanjaku (Andrei 2,2) here Vanya-dim-nom ... Here, Vanya-dim-acc 'Here, Vanja'

b. krestit... krestita (Peter, 1,10) cross-dim-nom-m cross-dim-m-gen or cross-dim-fem-nom 'a little cross... a little cross'

It is interesting to note that (20 a) is the first appearance of accusative case-marking for Andrei. Thus, nominative Case appears in 99.5% of the environments where it is obligatory.

Nominative case marking was also used in place of other morphological cases: it appeared in 29 out of 145 positions, where another form was appropriate, i.e. in 20% of these positions. The difference in these figures - 99.5% vs. 20% - is a strong argument for the children's knowledge of a "nominative position". However, a stronger argument can be made: there are two clearly defined structural positions, in which nominative Case consistently appears in place of the Case appropriate in adult grammars (the possessor nominal and the nominal following a quantifier), which account for 22 of the 29 uses of nominative in an

10 Here and in all of the Tables below the first of the two numbers gives the number of times the case-ending was used, the second number gives the number of environments in which the case-ending was appropriate.
inappropriate position. I will argue below that the children have misanalyzed the two structures, so that nominative is the appropriate case-marking for them. In the remaining positions, for which Cases other than nominative were appropriate, nominative case-marking was used only 8% of the time.

Nominative Case was used from the first session through the last one by both children, with the distribution of environments shown in Table 6:

<table>
<thead>
<tr>
<th></th>
<th>1.6</th>
<th>1.7</th>
<th>1.8</th>
<th>1.9</th>
<th>1.10</th>
<th>1.11</th>
<th>2.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 phrase</td>
<td>7/7</td>
<td>7/7</td>
<td>18/18</td>
<td>13/13</td>
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<td>5/5</td>
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<tr>
<td>Predicate</td>
<td>0/0</td>
<td>0/0</td>
<td>0/0</td>
<td>3/3</td>
<td>4/4</td>
<td>0</td>
<td>4/4</td>
</tr>
</tbody>
</table>

**Table 6**

Thus, while it is true that children use nominative Case more often than any other, it is also true that children use nominals in the structural positions requiring nominative Case more often than in any other positions. Since the nominals that appear in non-nominative environments bear nominative Case only 8% of the time, the second pattern consistent with the lexical-thematic hypothesis - the appearance of the default Case in all structural positions - is clearly not observed in the data.

5.3. The Non-Default Cases: A Random Distribution?

The last pattern of Case assignment consistent with the lexical-thematic hypothesis is random Case-marking appearing on nominals in children's speech. Presumably, the children who are producing this pattern are aware that nominals have different forms, but have not analyzed these different forms as corresponding to abstract Cases or their morphological realisation, so that they appear in free variation. In the next five sections I will show that this pattern is not observed in the data. Nominals appearing in the Spec of AgRO at S-Structure receive accusative Case; nominals theta-marked as goals, benefactives, or experiencers receive dative Case; lexical Cases, such as quirky accusative, genitive, and prepositional, are assigned reasonably successfully. The majority of the children's Case-related mistakes are far from random: first, they occur in two structural positions, the position of the pre-nominal possessive and the position of a complement of a noun, and second, the case-marking on the nominals in these positions is consistently nominative.

### 5.3.1 Accusative Case

Accusative case, which is a structural Case when it appears on direct objects and a lexical Case when it appears on complements of prepositions, is much less frequent than nominative for the children. Table 7 gives the number of appearances of accusative case-marking by months:

<table>
<thead>
<tr>
<th>Peter</th>
<th>1.6</th>
<th>1.7</th>
<th>1.8</th>
<th>1.9</th>
<th>1.10</th>
<th>1.11</th>
<th>2.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accusative env:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Obj. of V</td>
<td>0/0</td>
<td>0/0</td>
<td>2/2</td>
<td>0/0</td>
<td>0/0</td>
<td>0</td>
<td>20/21</td>
</tr>
<tr>
<td>Obj. of P</td>
<td>0/0</td>
<td>0/0</td>
<td>0/0</td>
<td>0/0</td>
<td>2/2</td>
<td>0</td>
<td>5/6</td>
</tr>
<tr>
<td>Non-accusative env</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Andrei</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2/2</td>
<td>2/2</td>
<td>2/2</td>
<td>2/2</td>
<td>2/2</td>
<td>2/2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accusative env:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Obj. of V</td>
<td>0/0</td>
<td>0/0</td>
<td>1/2</td>
<td>1/2</td>
<td>0/0</td>
<td>0/0</td>
<td>2/2</td>
</tr>
<tr>
<td>Obj. of P</td>
<td>0/0</td>
<td>0/0</td>
<td>0/0</td>
<td>0/0</td>
<td>0/0</td>
<td>0/0</td>
<td>0/0</td>
</tr>
<tr>
<td>Non-accusative env</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

**Table 7.**

Accusative case-marking was used in 32 out of 38 (84.2%) positions, in which it is obligatory, and in 27 out of 30 (90%) positions, in which accusative Case is assigned structurally (21a). There are three instances of direct objects which do not carry accusative case-marking: in the first occurrence of direct objects and accusative Case for Andrei (21b), one of the direct objects appears with the nominative case-marking; in another instance, Andrei uses dative case-marking on the direct object (21c); Peter uses nominative case-marking on a direct object once (21d).

21. a. i sobachku s'est' (Peter, 2,0)
   and dog-Dir-sg-acc sit-caus-inf
   i sobachku posadit' and dog-Dir-sg-acc sit-caus-inf
   'And to put the dog down' (puts the dog down)

b. i menja i manu (Andrei, 2,3)
   and l-sg-acc and mother-sg-fem-nom
   i menja i manu
   and l-acc and mother-acc-fem
   'both me and mother' (while combing the hair of both)

c. nel'za same (Andrei, 2,5)
   must-not l-dat-sg
   nel'za menja
   must not l-acc-sg
   'mustn't (do something) to me' (asking the experimenter to stop)
Maria Babyonyshev

d. knizecku mal'kaja polozhit' sjuda (Peter, 2,0)
   knizecku mal'kaju polozhit' sjuda
   book-dim-f-sg-acc little-f-sg-acc put-inf here
   'To put the little book here' (puts the book down)

There are three instances of direct objects marked with the partitive Case in the speech of Andrei. Recall that partitive case-marking is usually (although not for the lexical items used by Andrei) identical to genitive, has the meaning of 'some of noun', and can be used on any mass noun direct object. Therefore, these instances were not counted as environments where accusative case should have been used, and do not appear in the table above. There were no instances of genitive case-marking on direct objects of negated verbs, which is another environment where a direct object does not have to carry accusative case-marking.

In contrast with accusative as a structural Case, accusative as a lexical Case is rather problematic for the children. There where 8 instances of nominals appearing as complements of prepositions 'v - 'in', na - 'on', and pro - 'about', which assign lexical accusative Case, and only 5 (62.5%) of these nominals bore accusative case-marking. The appearance of nominals in the positions requiring lexical accusative Case was both late and infrequent: Andrei does not use these constructions at all, and Peter starts using them at 1;10. The mistakes Peter makes in these constructions occur in the first sentence where the prepositions are used: a complement of na - 'onto' - receives genitive case-marking in (22a), and a complement of pro - 'about' - receives nominative case-marking in (22b). Both prepositions appear with appropriately-case-marked complements at a later point (22 c,d).

22. a. na mjcakia. Upal na mjcakia (Peter, 1;10)
   on ball-sg-m-gen. fall-pst-sg-m on ball-sg-m-gen
   na mjacik. Upal na mjacik.
   on ball-sg-m-acc. fall-pst-sg-m on ball-sg-m-acc
   'On the ball. Fell onto the ball'

b. pro Krasnaja Sapocka (Peter, 2,0)
   about Red-f-sg-nom hat-dim-f-sg-nom
   pro Krasnju Sapocku
   about red-f-sg-acc hat-dim-sg-f-acc
   'about the Little Red Riding Hood'

c. na stul sjadet (Peter, 2,0)
   onto chair-m-sg-acc sit-fut-sg-3rd
   'He will sit down on the chair'

d. pocitat' pro Krasnju Sapocku (Pjotr, 2,0)
   read-inf about red-fem-sg-acc hat-dim-f-sg-acc
   'To read about the Little Red Riding Hood' (making a request)

Acquisition of the Russian Case System

This pattern - relatively few mistakes in the use of a structural Case, and relatively many in the use of the same Case as a lexical Case - is not very surprising: to appropriately Case-mark a complement of a lexical Case assigner, it is not enough to know the theta-role of the noun and its structural position in the sentence, idiosyncratic lexical properties of the Case-assigners have to be learned as well. Since such learning takes time and proceeds lexical item by lexical item, full control of lexical case-marking is expected to be delayed compared to structural and inherent case-marking.

There is only one instance of accusative case-marking appearing on a nominal in a non-accusative position: Andrei uses it on a vocative nominal (see (20a)). Thus, accusative case-marking is used in 90% of the positions where it is an obligatory structural Case, 62.5% of the positions where it is an obligatory quirk Case, and 0.1% of the positions where another Case is appropriate. Moreover, the children are using both structural accusative Case and structural nominative Case appropriately, which, since child grammars are UG-constrained, demonstrates that the projections of both AgrS and AgrO are present in their grammars, that the nominals move to the Specifier positions of these projections, and that appropriate and distinct Case features are checked in the Specifiers of AgrO and AgrS. Thus, the Case Filter, in whatever formulation we choose to give it, is operating with respect to structural Case. The next two sections investigate whether it is operating with respect to inherent Cases, as well.

5.3.2. Dative Case

Dative case-marking is appropriate for goals, benefactives, subjects of modals, and objects of certain prepositions (k - 'towards' is the only such preposition appearing in the data). Dative is clearly an inherent Case, whose appearance is determined by the theta-role born by a nominal - goal, benefactive, or experiencer - and not by the structural position of the nominal - the elements that bear dative case-marking can be S-Structure subjects, objects, object of prepositions, adjuncts. Since complements of the preposition k are goals, I chose to treat their case-marking as an instance of inherent Case, rather than lexical Case, usually assigned by prepositions. The monthly distribution of dative case-marking is given in Table 8.

<table>
<thead>
<tr>
<th>Peter</th>
<th>1.6</th>
<th>1.7</th>
<th>1.8</th>
<th>1.9</th>
<th>1.10</th>
<th>1.11</th>
<th>2.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goal</td>
<td>0/0</td>
<td>0/0</td>
<td>1/1</td>
<td>0/0</td>
<td>0/0</td>
<td>0/0</td>
<td>1/1</td>
</tr>
<tr>
<td>Benefactive</td>
<td>0/0</td>
<td>0/0</td>
<td>0/0</td>
<td>0/0</td>
<td>0/0</td>
<td>0/0</td>
<td>1/1</td>
</tr>
<tr>
<td>Modal subj</td>
<td>0/0</td>
<td>0/0</td>
<td>0/0</td>
<td>0/0</td>
<td>0/0</td>
<td>0/0</td>
<td>0/0</td>
</tr>
<tr>
<td>Andrei</td>
<td>2.1</td>
<td>2.2</td>
<td>2.3</td>
<td>2.4</td>
<td>2.5</td>
<td>2.6</td>
<td>2.7</td>
</tr>
<tr>
<td>Goal</td>
<td>0/0</td>
<td>1/1</td>
<td>3/6</td>
<td>4/4</td>
<td>4/4</td>
<td>0/0</td>
<td>1/1</td>
</tr>
<tr>
<td>Benefactive</td>
<td>0/0</td>
<td>0/0</td>
<td>0/0</td>
<td>0/0</td>
<td>1/1</td>
<td>0/0</td>
<td>1/1</td>
</tr>
<tr>
<td>Modal Subj</td>
<td>0/0</td>
<td>0/0</td>
<td>0/0</td>
<td>0/0</td>
<td>0/0</td>
<td>0/0</td>
<td>0/0</td>
</tr>
</tbody>
</table>

Table 8.
There were 24 instances of goals, benefactives, and subjects of modals in the data; dative case-marking appeared on 21 of the nouns requiring it (87.5%) (see 23 a, b, c). In the three instances of mistakes, nominative was used in place of dative (23 d).

23. a. Daj mne (Andrei, 2;5)
give-imp I-dat
'Give me'

b. Kapustki netu zain'ke (Peter, 2;0)
cabbage-sg.f-gen no hare-dim-m-sg-dat
'There is no cabbage for the hare'

c. Mae mozno, i Sete mozno (Andrei, 2;5)
I-dat allowed, and Seta-f-sg-dat allowed
'I may do this, and Seta may do this'

d. Mama, Sjesja (Andrei, 2;3)
mother-f-sg-nom, Sjesja-f-sg-nom
mama, Sjesja
mother-nom, Sjesja-f-sg-dat
'Mother, this goes to Syesya' (giving something to Syesya)

Four instances of the goal argument marked with dative appear without context, as one word utterances. I considered these utterances correct uses of goals, since in adult speech such utterances can only be elliptical sentences containing goals, and not, for instance, modal subjects.

The two appearances of verbs of motion with a goal argument, which require a preposition (k· 'towards') in adult speech, carried the correct case-marking of dative on the noun. However, Andrei omitted the preposition in his utterance.

The uses of dative case-marking in an inappropriate environment are given in Table 9:

<table>
<thead>
<tr>
<th>Andrei</th>
<th>2:1</th>
<th>2:2</th>
<th>2:3</th>
<th>2:4</th>
<th>2:5</th>
<th>2:6</th>
<th>2:7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accusative</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Genitive</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Possessive</td>
<td>0</td>
<td>1</td>
<td>10</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

Table 9

Peter never uses dative case-marking in an inappropriate environment. Andrei uses dative case-marking in place of structural accusative Case once (see 21 b), and in place of lexical genitive Case twice (24 b, c). Somewhat surprisingly, Andrei also uses dative in place of the possessive form of a noun in 14 cases, a typical example of which is given in (24 a).

Since only one lexical item, 'mne ·'i-dat' - occurs in the environment of and with the meaning of the possessive form, I do not think this should be analyzed as a productive pattern, with a Case assigning mechanism generating dative Case on the nominals appearing in the possessive position. It is much more plausible that this is an instance of faulty lexical learning, so that a Spell-out Rule replaces the combination of this pronominal stem and the possessive morpheme with a phonological string corresponding to the adults' realization of dative Case. Otherwise, we would expect to see dative case-marking appearing on a number of lexical items occurring in the possessive position, as is the case with the appropriate form of the possessive and with the inappropriate nominative form that is used by both children in the possessive position.

In 9 cases of the 14 given in Table 9 the nominal bearing the dative case-marking referring to a possessor occurs as a one word utterance, which the experimenter comments on as standing for the possessive form of the nominal. Note that this could not be an appropriate elliptical utterance, since no type of complete sentences has a possessor nominal marked with the dative case. Moreover, one-word utterances of dative nominals are typically interpreted as goals.

Thus, dative case-marking was used in 87.5% of positions, where it is obligatory as an inherent Case; it was not used as a lexical Case in the corpora. Dative case-marking appeared in 23.3% of the positions, in which another Case is obligatory, or, putting aside the possessive nominals, where dative case-marking does not seem to be productive, and in 0.4% of the positions, in which another Case is obligatory. The children's mastery of dative Case suggests that the Case Filter is operating with respect to inherent Cases, just as it is with respect to structural Cases. Not very surprisingly, the environments of inherent dative Case are not acquired simultaneously, but come in one by one: for both of the children, experiencers appear much later than goals and benefactives.
5.3.3. Instrumental and Prepositional Cases.

Another clearly inherent Case - instrumental - appears on instruments and passive agents in adult speech. No arguments with these theta-roles appear in the corpora, so that no nominals carrying instrumental case-marking appear there, either.

The prepositional Case, usually analyzed as a lexical Case, occurs only on complements of some prepositions which have diverse meanings and assign diverse theta-roles to their complements. No arguments requiring prepositional Case or nominals carrying prepositional case-marking are used by Andrei. Peter uses the preposition na - 'on' - with a complement 4 times, with the appropriate prepositional case-marking appearing on the nominal on three of them, as illustrated in (25a). In one instance, the ending used is indiscernible, being ambiguous between the prepositional and nominative case marking (25 b). Thus, lexical prepositional Case is used correctly 75% of the time.

25. a. Na ruke narisoval. (Peter, 2:0)
   on hand-dim-f-sg-prep draw-pst-m
   'I drew something on my hand'

b. Gde? na batareyka (Peter, 1:10)
   Where? on battery-f-sg-nom/ prep
   'Where? On the battery'

5.3.4 Genitive Case

Recall that genitive is the appropriate Case for complements of nominal elements, such as nouns, adverbial quantifiers, and numerical quantifiers larger than 1, for D-Structure objects of negated verbs, and for complements of certain prepositions (u -'at', iz -'out of', and ot -'from' are the ones that appear in the data). I am assuming that adnominal genitive and genitive of quantification are instances of structural genitive Case, as discussed in section 3.2., and that partitive genitive and genitive of negation involve quantifier phrases and therefore are instances of structural genitive, too. The genitive Case born by complements of prepositions is an instance of lexical genitive Case.

Table 10 gives the monthly distribution of genitive case-marking in genitive environments:

<table>
<thead>
<tr>
<th>Case</th>
<th>1:6</th>
<th>1:7</th>
<th>1:8</th>
<th>1:9</th>
<th>1:10</th>
<th>1:11</th>
<th>2:0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adnominal</td>
<td>0/0</td>
<td>0/0</td>
<td>0/0</td>
<td>0/0</td>
<td>0/0</td>
<td>0/0</td>
<td>0/0</td>
</tr>
<tr>
<td>Partitive</td>
<td>0/0</td>
<td>0/0</td>
<td>0/0</td>
<td>0/0</td>
<td>0/0</td>
<td>0/0</td>
<td>0/0</td>
</tr>
<tr>
<td>Negation</td>
<td>0/0</td>
<td>0/0</td>
<td>0/0</td>
<td>0/0</td>
<td>0/0</td>
<td>0/0</td>
<td>5/5</td>
</tr>
<tr>
<td>Quantification</td>
<td>0/0</td>
<td>0/0</td>
<td>0/0</td>
<td>0/0</td>
<td>0/0</td>
<td>0/0</td>
<td>0/0</td>
</tr>
<tr>
<td>Object of P</td>
<td>0/0</td>
<td>0/0</td>
<td>0/0</td>
<td>1/1</td>
<td>0/0</td>
<td>0/0</td>
<td>2/2</td>
</tr>
</tbody>
</table>

Table 10.

Genitive case-marking appeared on 21 out of 29 (72.4%) of the positions, where it was appropriate. In contrast to all of the patterns discussed above, genitive as a structural Case seems more problematic than genitive as a lexical Case: genitive case-marking was used in 13 out of 19 (68.4%) positions, where structural genitive is obligatory, and 8 out of 10 (80%) positions, where lexical genitive is obligatory.

Out of the four environments that involve structural genitive Case, three do not meet the criteria of being productive, that is, appearing with more than one nominal stem and more than one Case assigner. The fourth environment - genitive of quantification - is clearly productive for the children, but the nominals occurring in it do not bear genitive case-marking, a point to which we will return.

The adnominal genitive, appearing on the complements of nouns, is the most infrequently used genitive environment for the children: it does not appear in the speech of Peter, and Andrei uses the genitive form of a post-nominal possessor twice (26).

26. a. Et Vanya mu-u (Andrei, 2:7)
   this-0-case Vanya-m-sg-gen mu-u-0-case
   Eto Vanna korova/ korova Vani
   this-n-sg-nom Vanya-pos-f-sg-nom cow.-f-sg-nom/ cow-f-sg-nom
   Vanya-m-sg-gen
   'This is a cow of Vanya/ Vanya's cow'
b. Ein Vanya (Andrei, 2;7)
   this-0-case Vanya-m-sg-gen
   Etso Vanino
   this-sg-n-nom Vanya-poss-sg-n-nom
   'This is Vanya's'

Since only one lexical item - Vanja - 'Vanya' appears in the position of
adnominal genitive with genitive case-marking, I will not assume that the Case
assigning mechanisms responsible for checking the Case features of the
complements of nouns in adult grammars are operating here. It is likely that
Andrei is using an incorrect Spell-out rule for the combination of this particular
nominal stem and the possessive suffix. Two other considerations make this
even more plausible: the complements of nouns marked with genitive do not
appear before the head noun in adult speech, as in (26 a), and they do not appear
with a null nominal head, as in (26 b) - note that the same is true for English,
as the translation shows. Only the possessive form is possible in both of these
positions for adults. In addition, the genitive form of this particular nominal
van it - is very similar to its possessive form - vanin - and the correct possessive
form of this word does not appear in Andrei's speech.

The second environment which involves genitive of quantification and,
therefore, structural genitive is the partitive construction. Any mass noun acting
as a complement of a verb can appear with the partitive case-marking, which is
identical to the genitive case-marking for most lexical items. Andrei uses the
partitive case-marking three times, always with the same lexical stem - caj - tea.

27. a. Mne caju (Andrei, 2;4)
   I-dat tea-m-sg-part
   'Give me some tea'

As with adnominal genitive, the appearance of one stem with partitive case-
marking does not provide evidence that the partitive construction or the Case-
assigning mechanisms responsible for marking the nominals appearing in it are
productive. There are other likely explanations for the existence of the partitive
form for this lexical item: for instance, the partitive form can be lexicalized as
the accusative case-marking for this particular stem.

The third environment of the assignment of genitive as a structural Case is
genitive of negation. A variety of lexical items appear in the speech of both
children with the genitive case-marking in this construction (28).

28. a. Xrijuski netu (Peter, 2;0)
   pig-dim-sg-f-gen no.
   'There is no pig'

The correct use of genitive of negation is rather surprising: no transitive negated
verbs are used by the children, so that only subjects, but not objects bear it in
the data. Since only subjects of negated unaccusative verbs can be marked with
the genitive Case, correct use of this case-marking pattern seems to imply
mastery of the unaccusative - unergative distinction. However, only one verb
appears in the sentences with genitive subjects, the verb est' -be, which is
insufficient to support the claim that the Case-assigning mechanisms
responsible for genitive of negation are productive for the children. It is more
likely that the negated 'be' assigns lexical genitive Case to its complement in the
children's grammars, especially since this verb is the only one that assigns
genitive Case to its complement obligatorily, rather than optionally, under
negation.

The remaining construction that involves structural genitive Case is
quantification, and it is clearly productive for the children. A variety of nominals
occur with a quantifier, and a variety of quantifiers occur with a nominal.
However, the nominal following a quantifier bears an appropriate nominative
case-marking in 6 out of 8 (75%) instances of the appearance of this
construction. Note that the quantificational structures come in rather late: Peter
does not use the construction at all in the recordings, although he uses the
numeral odin - 'one' once, followed by a noun correctly marked as nominative at
1;10; Andrei uses the construction in which a noun follows a quantifier for the
first time at 2;3. The genitive case-marking on the complement of a quantifier is
used at 2;7 (29 a.), the nominative case-marking is used both before and after
that (29 b.):

29. a. I esce dom. Dva doma (Andrei, 2;7)
   and again house-sg-m-nom. Two-m-nom house-sg-m-gen
   'And one more house. Two houses'

b. Dom, dom, dom. Dva doma. I tri dom. (Andrei, 2;7)
   House-sg-m-nom, house, house. Two-m-nom house-sg-m-nom.
   And three-m-nom house-sg-m
   Dom, dom, dom. Dva doma. I tri doma
   house-m-nom, house, house. Two-m-nom house-m-sg-gen.
   And three-m-nom house-m-sg-gen.
   'A house, a house, a house. Two houses. And three houses'

Recall that Russian presents conflicting evidence about the status of quantifiers:
sometimes they act as heads taking nominal complements, and sometimes they
act as specifiers of the quantified nouns. Most analyses of Russian quantification
assume that the quantificational structures are QPs in some cases and NPs in
others and postulate some exceptional Case-assigning mechanism, via which the
quantifiers assign genitive Case in those constructions where they are Specifiers,
not heads.

Quantified nominals occurred only as 1 phrase utterances in the corpora, so that
there is no evidence that could show which element (the nominal or the
quantifier) the verbs agree with or what the case-marking would be in an
inherently or lexically Cased environment. The case-marking pattern observed
both the quantifier and the nominal following it appearing with the nominative
case-marking - is compatible with two analyses. In the first, the Qs are heads of their own maximal projections, and appear in the Case appropriate for the environment of the whole projection - nominative - but fail to assign genitive Case to their complement DPs, either assigning nominative Case instead, or not assigning any Case, so that their complements surface with the default Case. In the second, the Ns are heads of their own projections, appearing in the Case appropriate for the whole projection - nominative - the Qs occur as their specifiers, agreeing with the nominal heads in number, gender, and Case, as all other elements occurring in the specifier position within an NP or the DP dominating it do, but the process of exceptional assignment of genitive Case to the nominal heads fails to take place. I think the second analysis is preferable. If the first analysis was correct, and constructions that require structural genitive in adult grammars were generated with nominative by the children, there should be an abundance of complements of nouns and quantifiers marked with nominative occurring in the children's speech. This is not the case: the children are not productively using any of the structures that involve complements of nouns or quantifiers. On the other hand, the structure of quantified phrases adopted in the second analysis is obviously very common for the children: nouns often occur with lexically filled specifiers. What children seem to be unaware of is the fact that in adult grammars the quantifier assigns genitive Case to the nominal following it in some marked fashion, even though the nominal appears to be the head of the projection.

What emerges from the discussion above is a rather surprising generalization: children avoid using constructions that involve nominal heads taking complements, and they avoid analyzing structures as involving nominal heads with complements. In fact, as I have argued above, no structures in which a noun has a complement appear in children's speech, so that genitive as a structural Case is not used at all. Perhaps this is due to the universally marked status of a noun as a case-assigner, or a theta-role assigner.

Genitive as a lexical Case is used in 8 out of 10 (80%) instances, in which it is required. The most common use of lexical genitive is the possessive sentence, in which 75% of the complements appeared with the appropriate genitive case-marking (30a). Andrei used dative Case-marking on 2 of the possessors in the possessive sentences (24 b, c). There were two instances of other prepositions assigning genitive Case to their complements; both appeared with the appropriate case-marking (30 b,c).

30. a. U menja dyrka (Peter, 1,9)
    At gen hole-f-sg-nom
    I have a hole

G. (Ot kogo sprjaltal'ja?) (Andrei, 2,7)
   Ot Viviv
   From Viviva-f-sg-gen
   'Who did you hide from?' From Viviva'

Acquisition of the Russian Case System

c. Voda tezhet iz krana (Peter, 2,0)
   water-f-sg-nom flow-pres-3rd-sg out-of faucet-m-sg-gen
   'Water is flowing from the faucet'

Genitive case-marking appeared a total of 4 times in non-genitive environments: on 2 objects of prepositions that require accusative case (22 a), and on two one-phrase nominals (20 b). All of the mistakes were made by Peter.

<table>
<thead>
<tr>
<th>Non-genitive environments</th>
<th>0</th>
<th>3</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accusative</td>
<td>0</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Nominative</td>
<td>0</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

Table 11

To sum up, genitive case-marking occurs in 68.4% of the constructions, in which genitive is obligatory as a structural Case. As I have argued above, none of these constructions involve productive assignment of structural genitive: the environments requiring the use of structural genitive Case are absent in the data, and structural genitive Case is absent, as well. Genitive case-marking occurs in 80% of the environments, where it is obligatory as a lexical Case. The mastery of genitive as a lexical Case is comparable with the mastery of accusative and prepositional lexical Cases. Finally, genitive case-marking occurs in 0.6% of non-genitive environments.

5.3.6. Possessive Nominals

The possessive form of a noun consists of a possessive suffix attached to the noun stem, followed by a Case ending, which agrees in Case and phi-features with the head noun. It is the most common way of expressing possession within a noun phrase in Russian. I am assuming that the possessive form of a nominal is derived by incorporating the head of the possessive phrase, generated in the Caseless Spec of NP position, into the possessive Determiner (see section 3.2), so that the possessives are nouns at D-Structure, and subject to the Case Filter, even though they are treated as adjectives within the Morphological module of the grammar. The whole possessive phrase cannot undergo movement to the Spec of DP, as possessive phrases in English do, because the possessive Determiner in Russian is not a Case-assigner. Note that the dative possessives that appear in children's speech are clearly nominal even for the purposes of morphology, unlike the possessives in adult speech.
Table 12 gives the number of appropriate possessive forms appearing in the possessive positions and the numbers of inappropriate forms appearing there:

<table>
<thead>
<tr>
<th></th>
<th>1:6</th>
<th>1:7</th>
<th>1:8</th>
<th>1:9</th>
<th>1:10</th>
<th>1:11</th>
<th>2:0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peter</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poss.</td>
<td>0/0</td>
<td>0/0</td>
<td>0/1</td>
<td>0/0</td>
<td>0/0</td>
<td>0/0</td>
<td>3/4</td>
</tr>
<tr>
<td>Nom.</td>
<td>0/0</td>
<td>0/0</td>
<td>1/1</td>
<td>0/0</td>
<td>0/0</td>
<td>0/0</td>
<td>1/4</td>
</tr>
<tr>
<td>Andrei</td>
<td>2/1</td>
<td>2/2</td>
<td>2/3</td>
<td>2/4</td>
<td>2/5</td>
<td>2/6</td>
<td>2/7</td>
</tr>
<tr>
<td>Poss.</td>
<td>0/0</td>
<td>0/2</td>
<td>4/26</td>
<td>1/3</td>
<td>6/7</td>
<td>4/5</td>
<td>2/2</td>
</tr>
<tr>
<td>Nom.</td>
<td>0/0</td>
<td>1/2</td>
<td>12/26</td>
<td>1/3</td>
<td>0/7</td>
<td>0/5</td>
<td>0/2</td>
</tr>
<tr>
<td>Date</td>
<td>0/0</td>
<td>1/2</td>
<td>10/26</td>
<td>1/3</td>
<td>1/7</td>
<td>1/5</td>
<td>0/2</td>
</tr>
</tbody>
</table>

Table 12

The possessive form of nouns and pronouns occurs in only 20 out of 50 (40%) of the positions where it is appropriate (31a). Both Peter and Andrei use nominative case-marking, without the possessive suffix on the possessor noun, in 32% of the possessive positions (see 31b). Andrei also uses dative case-marking, without the possessive suffix on the possessor noun, in 28% of the possessive positions (see 31c).

31. a. Vot moja pi-pi (Andrei, 2:7)
     here my-f-sg-nom pi-pi-oscase
     Vot moja mys'
     here my-f-sg-nom mouse-f-sg-nom
     'Here is my mouse'

b. Babuska domik (Peter, 2:0)
   grandmother-f-sg-nom house-dim-f-sg-nom
   Babuskin domik
   grandmother-poss-f-sg-nom house-dim-f-sg-nom
   'grandmother's house'

c. Mne kisa (Andrei, 2:6)
   1-dat cat-f-sg-nom
   moja kisa
   my-poss-f-sg-nom cat-f-sg-nom
   'my cat'

It is not clear that there is a productive Case-assigning mechanism responsible for the appearance of the dative case-marking on the possessives: this case-marking pattern occurs only in the speech of Andrei, and in all 14 instances of this case-marking pattern, the same stem was used, mne ' 1-dat' (see section 5.3.2). The appropriate possessive form is used simultaneously with the inappropriate dative form in the possessive environment, and the appropriate dative form in the dative environments, suggesting that the two forms correspond to two alternative Spell-out Rules for the combination of the stem 'I'

and the possessive suffix.

Both children use the appropriate possessive form alongside the inappropriate nominative form. All of the phrases containing possessors occur in nominative positions in the corpora, both in subject positions and in one-phrase utterances, so that the head noun, appropriately, carries nominative case-marking. There are two possible ways to account for the appearance of nominative case-marking and the absence of the possessive suffix on the possessors in these constructions: nominative Case could be copied onto the possessor from the head noun by the noun-adjective concord mechanism within the Word Synthesis component of morphology, after the possessor has incorporated into the possessive Determiner, or it could be the structural Case assigned to the element in the S-Structure position occupied by the possessors. If the first approach is correct, the structure of possessive phrases in child grammar is identical to that of adult grammar, except that the possessive Determiner is phonologically unrealized. The possessive nominal escapes the Case Filter by undergoing incorporation, and does not carry Case features in syntax. On this approach, if a phrase containing a possessive occurred in a non-nominative position, for instance an accusative position, we would expect to see both the possessor and the head noun bearing accusative case-marking. If the second approach is correct, the structures of possessive phrases in child and adult grammars are quite different: in child grammar the possessive phrase moves as a whole from the Caseless Spec of NP position where it is base-generated to a position where it can check its Case features, which, presumably, is the Spec of DP position. Then, the children do not know that the possessive Determiner is not a Case assigner in adult Russian, and they assume that the nominative Case is checked in the Spec of DP. On this approach, if we find a DP containing a possessive in a non-nominative position, for instance an accusative position, we expect to see the head noun bearing the accusative Case, and the possessive bearing the nominative Case.

Can either of the two approaches be confirmed by the data, given that DPs containing possessive phrases occur only in nominative positions? I think the first approach can be shown to be incorrect by the fact that children clearly treat the possessors as nouns, not adjectives. First, the case-marking that appears on the possessors is taken from the nominal, not the adjectival, paradigm. No similar mistake - using the nominal case-marking on an adjective modifying a noun - occurs anywhere in the corpora. Second, if it is noun-adjective concord that is responsible for the appearance of nominative Case on the possessives, other features that are copied by the concord rule should appear on the possessive as well. Yet, the possessives show no gender or number agreement with the head noun (see 31b). This strongly suggests that the possessives are not adjectives at S-Structure, as they are in adult grammar, but nominals, which must bear abstract Case. 11

11 I do not think it is possible to de-activate the Case Filter exclusively for the possessive nominals, so that NPs without any Case features could function as possessives, surfacing with the default nominative Case, and the predictions of the lexical-thematic theory would be fulfilled with respect to this
The minimal assumption that can explain the observed patterns is that children have a Case-assigning phonologically null possessive Determiner alongside the non-Case-assigning one, which is the only one present in the adult grammar. Abney (1987) describes nominative Case-marking on the possessors within a DP as the unmarked option for languages, given the parallel structures of DPs and CPs and the identical function of the subjects in CPs and possessors in DPs, so that it is not altogether surprising if children adopt the mechanism.

Finally, 9 of the 16 instances of the use of the nominative case-marking without the possessive suffix given in Table 12 are one-word utterances without linguistic or situational context, in which the experimenter glossed the meaning as that of the possessive form, 9 of the dative forms of the possessor are one-word context-free utterances, as well. Note that there are no constructions in Russian, in which a possessor can carry nominative or dative case-marking, such that an elliptical version of them could have the meaning of a possessor.

To summarize, the appropriate possessive form occurs in 40% of the possessive environments, the inappropriate nominative case-marking is carried by 32% of the nominals in the possessive environments, and the inappropriate dative case-marking is carried by 28% of the nominals in the possessive environments. There are no possessive forms that occur in non-possessive environments. I have argued above that the dative case-marking is not assigned by a productive Case-marking mechanism, that the nominative case-marking appears when a phonologically null possessive Determiner, able to check nominative Case, is generated by the children, and that the appropriate possessive form appears when the possessive suffix, unable to check Case, is generated.

5.4. Discussion

The last five sections were devoted to the examination of the last possible pattern consistent with the lexical-thematic analysis: children employing morphological case-markings randomly, without considering the structural position of the case-marked nominal. If this pattern was observed it could be argued that although the children know that nominals occur in different forms, these forms have not been analyzed as corresponding to the morphological realization of abstract Case, which is altogether absent in their grammars. However, this pattern is not observed in the corpora: the children have full mastery of nominative and accusative structural Cases, from the moment of the appearance of the arguments that require them, using nominative in 597 out of 600 appropriate positions, and accusative in 27 out of 30 appropriate positions; the children have full mastery of the inherent Cases, from the moment of the appearance of the arguments that require them, using dative Case in 21 out of 24 appropriate positions; the children do better than chance with the lexical Cases, using lexical accusative in 5 out of 8 appropriate positions, lexical genitive in 8 out of 10 appropriate positions, and lexical prepositional in 3 out of 4 appropriate positions. The children fail to use structural genitive Case or the constructions requiring it: the only construction that involves structural genitive Case for adults, productive for the children, receives a deviant analysis, which does not involve structural genitive Case. In a large portion of the possessive phrases children generate a phonologically null possessive Determiner, which checks nominative Case and is unavailable in adult Russian. This pattern of Case-assignment has been analyzed as the unmarked one by Abney (1987). Note that even in the last two constructions, which involve inappropriate case-marking, the Cases assigned are consistent, rather than random: only nominative case-marking appears in both.

6. Arguments for Caseless NPs in English Revisited

Recall that one of the arguments used to show that children acquiring English use only Caseless NPs at the lexical stage was the lack of the Determiner clitic 'the' in possessive phrases (presumably, the possessor is Caseless then), and the lack of the semantically-empty preposition 'of' in the noun phrases containing a complement (presumably, the complement is Caseless, then, as well). However, Russian children, who use case-marking correctly in all other environments, make remarkably similar mistakes in the constructions that correspond to the English possessive phrases and nominal complement phrases. Recall that the possessive suffix (which is analyzed as a Det heading the possessive DP) is phonologically null in many of the possessor constructions. Also, the only constructions, in which a nominal has a complement, that appear in the data - the quantificational structures - lack genitive case-marking on the complement (genitive case-marking has the same function within a Russian noun phrase, as the preposition 'of' in English) and are, arguably, misanalyzed by the children. Thus, it seems very plausible that the difficulties that these constructions cause to the children acquiring English have nothing to do with the Case status of nouns in their grammar, since the same constructions cause similar problems to children acquiring Russian, who have very good control over the Case system.

Another construction used to argue for the Caseless status of nouns at the lexical stage is the binominal sentence, two examples of which are given in (33):

33. a. [VP [NP Roland] [v e] [NP sweet]]
33. b. [VP [NP Mummy] [p [r e] [NP kitchen]]]

(Radford (1990))

Radford proposes that unless an empty lexical head has a Case-assigning antecedent, it cannot assign Case to its complement, so that sentences in (33) lack possible Case-assigners and contain Caseless NPs. The principle proposed
is rather ad hoc, and cannot be universally correct - binominal sentences are acceptable for Russian adults, given that the phonologically null verb is recoverable from context. However, the data examined here provide numerous examples of binominal sentences with appropriately case-marked nominals, showing that the structure assigned to the sentences in (33) and the analysis of the nominals in them as Caseless is actually incorrect for children, as well (34a).

34. a. I mne caju (Andrei, 2;4)  
1-dat tea-m-sg-part  
'Give me tea'

b. Ale, djadjia, idi mne (Andrei, 2;7)  
hello, uncle-m-sg-voc, go-imp me-dat  
acc, djadjia, idi ko mne  
hello, uncle-m-sg-voc, go-imp to me-dat  
'Hello, uncle, come to me'

All of the nominals occurring in binominal sentences carry appropriate case-marking, that is, the case-marking they would carry in the corresponding complete sentence.

Another pattern used to argue that NPs at this stage are Caseless was the occurrence of nominals with intransitive verbs without a preposition, which Case-marks the nominal in adult grammar. This pattern, as it occurred in the data, is shown in (34 b) The sentence is not a possible one for an adult, but the nominal occurring in it is case-marked, and bears the Case that would be assigned to it, if the preposition was present. Thus, the two structures described above contain appropriately case-marked nominals in Russian, where direct evidence of the nominals' Case status is available, and should be assumed to contain appropriately Cased nominals in English, as well.

A claim made by Radford, not directly related to the questions examined in the paper, seems to be repudiated by the data, as well. Recall that the one-word stage of the grammar's development has been claimed to be pre-categorical, so that the lexical items used are not specified for category and, thus, cannot bear category-specific inflections, such as the number morpheme for nouns, and the tense morpheme for verbs. All of the lexical items in the corpora examined here bear category-specific inflections, except for the incomplete and onomatopoeic words, discussed in section 3. This is true even for the earliest recordings, conducted at the one-word stage for both children. Plural nominals appear later than singular ones, but since even singular nominals in Russian bear a [case + number] morpheme, specific to nouns only, the claim can be easily seen as incorrect. Note that other categories appear in the speech of children at this stage, so that nominal inflection is used contrastively, and the lexical items that carry it must be specified for their category in the lexicon.

7. Conclusion

The data presented above conclusively show that children acquiring Russian use morphological case-marking appropriately from the moment of the appearance of structures that demand it. Since none of the patterns of case-marking consistent with the lexical-thematic analysis occur for Russian children at any point in their development, we must conclude that the analysis and the theory underlying it are wrong. If early grammars are taken to be UG-constrained, then the presence of appropriate and contrastive case-marking demonstrates that the Case-assignment mechanisms of adult grammars are present and operating. Thus, the grammars of the children, whose speech I considered in this paper, must contain projections of AgrO and AgrS, with Case-checking occurring in them, and they must contain the Case Filter formulated in such terms that it forces nominals marked with structural Case to undergo movement to check it, and forces other nominals to surface marked with inherent and lexical Case.

The children's use of the Case system is not identical to adults': many structures involving specific Cases are absent or infrequent, and many constructions have obligatory elements, such as verbs and prepositions, omitted in them, creating unusual Case-marking patterns. Thus, there are vastly more nominative environments, than environments of any other Case; environments of some Cases, such as structural genitive and inherent instrumental, are absent completely. It is possible that the infrequency of these constructions is explained by the lack of the Case-assignment mechanisms responsible for case-marking the nominals appearing in them; it is also possible that some other aspect of these constructions is making them difficult. However, given the appearance of appropriately Cased nominals in other constructions at the same time, the infrequency of these constructions cannot be explained by the absence of the Case Filter or the functional categories that it refers to. The second property of children's speech that makes it unlike that of adults is the abundance of inappropriate elliptical utterances: one phrase utterances, utterances missing verbs, etc. The case-markings on the nominals occurring in these constructions are, as a rule, appropriate, that is, identical to those that would be found in the complete utterances. The elliptical utterances used by children are possible adult elliptical utterances, but require a much richer situational and linguistic context to be used. Thus, the pattern observed is not related to the Case Theory in early grammars - there is no freer Case-assignment by phonologically null elements in the grammars of the children than in the grammars of adults - rather, it is related to the children's incomplete mastery of Pragmatics, so that a grammatical elliptical utterance occurs in a context, from which the omitted elements cannot be recovered. This is very reminiscent of the conclusion reached by Chien and Waxler (1990) in connection with an investigation of the status of the Binding Theory in early grammars.

Since the Case Filter and the functional categories it refers to are present very early in the grammars of Russian children, they should be assumed to be present early in the grammars of the English children, as well. Then, alternative explanations should be found for the data that were explained by the absence of
the Case Filter in child grammars. I have shown that the absence of non-thematic Case-assigners, such as the possessive clitic 'a' and the preposition 'of,' cannot be explained by the absence of the Case Filter, since their Russian equivalents - the possessive suffix and structural genitive Case - are absent in the speech of Russian children, who have no difficulties with Case in other environments. I have also shown that sentences containing phonologically null Case-assigners, such as binomial sentences with a phonologically null verb or preposition and sentences with intransitive verbs and nominal complements of phonologically null prepositions, cannot be taken as ungrammatical universally or containing Caseless nouns, since they occur both for Russian adults and Russian children with appropriately Cased nominals.

The only type of mistake that seems to give real evidence for difficulties with the Case system for children acquiring English is their inappropriate use of various pronominal forms. However, this might be the expected pattern for a language, in which all nominals are marked with abstract Case, but only a small subset of them, the pronomous, gives that abstract Case morphological realisation. In learning the morphological component of the grammar, children can be expected to realize early that nouns do not require morphological realisation of Case. Then it can take some time to learn that the general rule has an exception and to learn the appropriate Spell-out rules, just as it takes some time for children to learn the exceptional past tense forms. Thus, it seems possible and, in fact, desirable, to discover alternative explanations of the patterns that have been used to argue for the absence of the Case Filter in the early grammars of English. The English data do not disprove the main claim of this paper - that, although a large amount of morphological learning has to take place, the Case Filter and the functional projections and the mechanisms necessary for it are operating as soon as children start to use multi-word utterances with internal structure.

References

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