

Acquisition of case and plural in Finnish*

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1. Aims

After a structured overview of the Finnish case system, the acquisition of case markers and case functions as well as early plural forms are studied in the light of corpora including diary material and recordings of two Finnish-speaking children.

The theoretical background is usage-based: it is assumed that the child constructs grammatical categories in a stepwise way; the forms which the child picks up from the input and uses in his/her own speech are slowly organized into patterns (schemas) so that the grammatical system of the language acquired will emerge. The important steps are regarded to be premorphology, when the first (rote-learned) forms are acquired and used in short utterances (typically consisting of only one word), and protomorphology, when the child detects morphological regularities and starts to produce analogical forms based on morphological contrasts. Two topics are dealt with in detail: the children's innovative use of morphological means (especially types of analogies) and the first nominal oppositions (paradigmatic contrasts with two members) and mini-paradigms (paradigmatic contrasts with at least three members; for a thorough presentation of the term miniparadigm, see Kilani-Schoch and Dressler 2002: 50–51). Both the analogies and the oppositions are a sign that the child actively processes the resources of the language.

2. The Finnish case system

2.1. Nominative and oblique cases

The case system of Modern Finnish consists of the unmarked nominative case and three groups of oblique cases. The nominative singular is the basic form of nominals (nouns, adjectives, numerals and pronouns) and has no suffix. The nominative plural is formed with the suffix *-t*. A function of the nominative which is especially important in early language acquisition is naming. The subject of the sentence is usually in the nominative, but in existential sentences it may be in the partitive.

The three groups of oblique cases are grammatical, local and marginal cases. The grammatical and local cases are a core part of Finnish morphosyntax. The main functions of the Finnish cases with special reference to child language are presented in detail in Toivainen (1997: 94–102); their most important functions in the present context will be dealt with in section 3.1 below.

Finnish is an accusative type language: while the subject is unmarked the object is usually marked. It remains unmarked only when there is no subject, e.g. in imperative and passive (impersonal) sentences (cf. 2.2). Object marking in sentences with a subject is important, because the word order of Finnish is relatively free serving different textual functions and may also be used to express emphasis or contrast. Therefore the object may precede the verb for several reasons (e.g. thematic or emphatic).

In Finnish, location is expressed by means of local cases rather than by prepositions. Some local cases also have other functions such as beneficial (allative) and instrumental (adessive).

Morphophonological alternations, notably grade alternation and alternations of the stem-final vowel, often occur in the context of suffix attachment. These morphophonological alternations are so salient that sometimes children detect them before the suffixes and use them as a means of inflecting Finnish words (cf. 3.2.3).

To illustrate the Finnish inflectional system, let us compare some different noun paradigms:

(1)	Nominative	<i>pallo</i>	<i>jalka</i>	<i>vesi</i>
	Genitive	<i>pallo-n</i>	<i>jala-n</i>	<i>vede-n</i>
	Partitive	<i>pallo-a</i>	<i>jalka-a</i>	<i>vet-tä</i>
	Illative	<i>pallo-on</i>	<i>jalka-an</i>	<i>vete-en</i>
	PL nominative	<i>pallo-t</i>	<i>jala-t</i>	<i>vede-t</i>
	PL partitive	<i>pallo-j-a</i>	<i>jalko-j-a</i>	<i>ves-i-ä</i>
	PL illative	<i>pallo-i-hin</i>	<i>jalko-i-hin</i>	<i>ves-i-in</i>
	Gloss	'ball'	'foot'	'water'

A stem like *pallo* 'ball' does not have any morphonological alternations. In stems like *jalka* 'foot' there is grade alternation *lk : l* in certain forms and also a change in the stem-final vowel *-a > -o* before the plural suffix *i/j*. In inflectionally complex stems like *vesi* 'water' stem-final *e* is deleted in the partitive singular (this shortened stem is called the consonant stem), there is grade alternation *t : d*, and assibilation *t > s* occurs before *i*.

2.2. Grammatical cases

The partitive suffix *-TA* has four allomorphs in Standard Finnish: *ta*, *tä*, *a* and *ä*. The long variants *-ta* and *-tä* are used with monosyllabic stems (e.g. *maa-ta* ‘land-PARTIT’), consonantal stems (e.g. *vet-tä* ‘water-PARTIT’) and after a long vowel or diphthong (e.g. *tiistai-ta* ‘Tuesday-PARTIT’). The short variants *-a* and *-ä* are used after a short vowel with stems of at least two syllables. In colloquial Finnish, this ending *-A* is assimilated to the final vowel of the stem, which is lengthened (e.g. *talo-a* ‘house-PARTIT’ is assimilated to *taloo* and *tyttö-ä* ‘girl-PARTIT’ to *tyttöö*). These assimilated forms also frequently occur in child language. The Finnish partitive has many grammatical functions, one of which is marking partial quantity.

The ending of the genitive singular is *-n*; the genitive plural has many allomorphs, but they all have the final *n* in common. The genitive primarily expresses possession but it also has some grammatical functions, such as marking the head of a postposition (example 2).

- (2) *sinu-n* *kanssa-si*
 you-GEN with-POSS.2S
 ‘with you’

The accusative, which is the most common case for marking the object in Finnish, does not have a stable ending: the accusative singular is sometimes morphologically unmarked (just like the nominative singular) and sometimes homophonous with the genitive. There are also some specific accusative forms of pronouns: all six personal pronouns as well as the interrogative pronoun *ken* ‘who’ form the accusative with the suffix *-t*, e.g. *kene-t* ‘who-ACC’, *meidä-t* ‘we-ACC’. Pronominal forms carrying the suffix *-t* are described as accusatives in practically all Finnish grammars, whereas the forms with an *n*-suffix are interpreted as genitives in some of them (e.g. by Hakulinen et al. 2004). The advantage of the latter interpretation is a certain simplification of the nominal paradigm. The disadvantage is that the functions of the genitive become more heterogeneous this way.

In the plural, the accusative is always nominative-like and carries the suffix *-t*. In the singular, the nominative-like accusative marks the object when the subject is not overtly expressed, as in imperative and passive sentences. Otherwise, the genitive-like accusative is used for distinguishing the two central noun phrases of the sentence, the direct object (carrying the suffix *-n*) and the subject (in the nominative). Examples:

- (3) a. imperative *lue kirja*
 read book
 ‘read the book!’
- b. passive *kirja lue-taan*
 book read-PASS
 ‘the book is read’
- c. active indicative *sinä lue-t kirja-n*
 you read-2S book-ACC
 ‘you read the book’

2.3. Local cases

The Finnish local cases constitute a fairly coherent system of nine members: three general local cases which are grammaticalized to a great extent (partitive, essive and translative), three internal cases expressing IN-location (illative, inessive and elative) and three external local cases expressing ON- and AT-location (allative, adessive and ablative) and also certain other functions. In each of these three groups, there is one case for expressing motion toward (= TO-cases TRANSL, ILL and ALL), one for expressing the static location in or at/on (= IN-cases ESS, INESS and ADESS) and one for expressing going out or away from somewhere (= FROM-cases PARTIT, ELAT and ABL).

Many local case forms have been fossilized and have become local adverbs which usually come in groups of three in the TO-, IN- and FROM-cases (e.g. *koti-in* ‘home-ILL’ (= home), *koto-na* ‘home-ESS’ (= at home), *koto-a* ‘home-PARTIT’ (= from home).

2.3.1. The general local cases: partitive, essive and translative

The general local cases are the oldest of the three subgroups of local cases. They have many other functions besides purely local ones: the partitive has different grammatical functions altogether and is nowadays used in local function only in certain adverbs; the role cases essive and translative most often express an abstract location or role.

The case ending for translative is *-ksi* (*-kse-*), e.g. *ystävä-ksi* ‘friend-TRANSL’ (= to [become] a friend), *ystävä-kse-ni* ‘friend-TRANSL-POSS.1S’ (= to [become] my friend). The case suffix for essive is *-na*, e.g. *ystävä-nä* ‘friend-ESS’ (= as a friend), *lahja-na* ‘present-ESS’ (= as a present). The TO-case translative expresses that something is becoming something, e.g. *kasva-a suure-ksi* ‘grow-3S big-TRANSL’ (= grows and becomes big), and the IN-case essive

often renders a role, e.g. *opettaja-na* ‘teacher-ESS’ (= as a teacher). The old local use of these three cases is still preserved in some frozen expressions, especially in such adverbs as *taa-kse* ‘behind-TRANSL’ (= behind-TO) : *taka-na* ‘behind-ESS’ (= behind-IN) : *taka-a* ‘behind-PARTIT’ (= from behind) formed from the stem *taka-* ‘behind’ or in the postposition *luo-kse* ‘to’, *luo-na* ‘at, by’, *luo-ta* ‘from’.

2.3.2. External local cases (*AT-cases*, *ON-cases*)

The three external local cases are allative ‘to’ (suffix *-lle*), adessive ‘at, on’ (suffix *-lla*) and ablative ‘from’ (*-lta*). These cases have other functions besides the purely local ones. The adessive is also used to express instrumental and possessive functions with inanimate and animate nouns, respectively:

- (4) a. *avaime-lla*
key-ADESS
‘with the key’
- b. *minu-lla*
me-ADESS
‘in my possession, at my disposal’

The beneficiary function of the allative corresponds to the dative in certain other languages:

- (5) *sinu-lle*
you-ALL
‘to you’

2.3.3. Internal local cases (*IN-cases*)

The three internal local cases are illative ‘into’, inessive ‘in’ (*-ssa*), and elative ‘out of’ (*-sta*). Of all groups of local cases, the internal ones have the purest local functions. The illative suffix has many allomorphs. The allomorphs are *-hVn* after diphthongs and with monosyllabic stems, e.g. *tiistai-hin* ‘Tuesday-ILL’ (= till Tuesday), *talo-i-hin* ‘house-PL-ILL’ (= into the houses), *maa-han* ‘ground-ILL’ (= into the ground), *-Vn* after a short vowel in all other syllables than the first, e.g. *talo-on* ‘house-ILL’ (= into the house), *banaani-in* ‘banana-ILL’ (= into the banana), and *-seen* (*siin* in the plural), e.g. *estee-seen* ‘obstacle-ILL’ (= into the obstacle), *este-i-siin* ‘obstacle-PL-INTO’ (= into the obstacles).

2.4. Marginal cases

Besides the grammatical and local cases, there are the following marginal cases:

comitative	<i>-ine</i>	‘with’
instructive	<i>-in</i>	‘by means of’
abessive	<i>-tta</i>	‘without’

There is the following evidence for the marginal status and the relative unproductiveness of the above cases: First, these cases do not occur as frequently as other cases. Second, there is some alternation between synthetic marking and prepositional as well as postpositional constructions, e.g. *raha-tta* ‘money-ABESS’ (= without money) ~ *ilman rahaa* ‘postposition money-PARTIT’ (= without money), *laps-ine-en* ‘child-COM-poss.suff.’ (= with his/her children) ~ *lastensa kanssa* ‘child-poss.suff.’ (= with his/her children). Third, the case suffix of the comitative (*-ine*) is fused with the plural suffix, but the comitatives are used for both singular and plural referents. The comitative and the instructive are only productively used in the plural; in singular, the suffix of the instructive is identical with the suffix of the genitive and that is why the instructive is used only in frozen expressions in the singular, e.g. *jala-n* ‘foot-INSTRUC’ (= afoot).

The most frequently occurring marginal cases are the instructive and the comitative, but children start to use them rather late. There are transition problems between the marginal cases and adverbs (Pöchtrager et al. 1998: 77–78). If the marginal case forms are taken to be adverbs, their suffixes are derivational rather than inflectional.

3. The acquisition of the Finnish case system

3.1. Forms and functions of the first case markers, a general overview

Finnish-speaking children use case forms from the very beginning. The reason is that nouns always occur in a certain case form in the input. Case forms occurring in the one-word stage are mostly suffixless nominatives, but a great number of nouns also occur in the partitive and in certain local case forms. Especially illatives such as *koti-in* ‘home’ and *syli-in* ‘into the lap’ are used early by many children.

Grammatical cases emerge early in the speech of Finnish children. The two main reasons seem to be their high frequency in the input language and their overall shape (*Gestalt*), which is shorter and less complex than that of local (and

marginal) cases, because the case suffix does not constitute an additional syllable (except in some partitive forms, which are however often contracted in colloquial Finnish: *-VA* > *-VV*, e.g. *maito-a* ‘milk-PARTIT’ > *maito-o*, and *-tA* > *-t*, e.g. *mon-ta* ‘many-PARTIT’ > *mon-t*). The relevance of syllable structure for the order of emergence is supported by the fact that the first local case used by Finnish-speaking children is usually the illative (Toivainen 1980: 113), especially its short allomorph *-Vn* (lengthening of the final stem vowel + *n*). In early child language, this form may also replace the longer TO-case allative (see 4.2 below).

The first oblique cases used by Finnish-speaking children fulfill the following functions (cf. Toivainen 1997: 94–102) and have the following inflectional markers:

- partitive: object marking (partial quantity, e.g. food), the suffix variants *-TA* and *-A* ~ *-V* (= vowel lengthening, assimilated from *-A*), e.g. *vet-tä* ‘water-PARTIT’ (= some water), *maito-a* ~ *maito-o* ‘milk-PARTIT’ (= some milk), *mehu-a* ~ *mehu-u* ‘juice-PARTIT’ (= some juice);
- genitive: possession, marking the head of a postposition, suffix *-n*;
- accusative: object marking (total object + resultative aspect), the suffix of accusative singular is mostly *-n* but see 2.2;
- illative: motion to(ward) something, the most common suffix variant is *-Vn* = lengthening of the final stem vowel + *n*, e.g. *syli-in* ‘lap-ILL’ (= into the lap);
- other local cases: besides location, also beneficiary (allative) and instrument + possessor (adessive). The functions of beneficiary of the allative (e.g. *äidi-lle* ‘mother-ALL’ (= to the mother)) and possessor (and instrument) of the adessive are so important in the use of these cases that when expressing concrete location, children occasionally use the internal local cases illative and inessive instead of the external local ones allative and adessive (cf. 4.2 below).

The illative tends to be the first local case form. When it emerges, children usually start with the short allomorph *-Vn* lengthening the stem-final vowel and adding *n*. The reason may be that this allomorph is shorter than the others and also lighter in the sense that it does not constitute a syllable of its own but is attached to the last vowel of the stem forming the coda of the last syllable. In the Finnish child language, the illative can be favoured in early local expressions at the expense of the external local case allative, which is marked by a longer suffix and also carries other functions besides the local one.

These first case forms used by the child constitute the nucleus of the Finnish case system. In the following section, we will present a detailed analysis of the acquisition of the case system by two Finnish-speaking children.

3.2. The development of singular case forms in two Finnish-speaking children: diary data

3.2.1. *Diary data and recordings*

The main subject of the present study is a girl, Tuulikki, who was born in June 1991. Diary data were gathered fairly intensively from her speech ever since her first words at the age of 1;0 for about five years; the latest diary data are from her school age. Recordings of about one hour per month have been made since the age of 1;7; there is no recording at 2;0 and only a short one (of about 5 minutes) at 2;7. Her brother Tuomas, born six years later, will be studied especially in the early stages of language acquisition. There are diary data from the boy's first words and recordings of 30 to 60 minutes per month starting from the babbling period until school age. In the present paper, only the period from 1;7 to 2;2 has been analyzed. The recording situations are mostly free play situations at home besides a few recordings where picture books are looked at and discussed. The children interact mostly with their parents and only occasionally with each other.

3.2.2. *Emergence of the first cases*

At the onset of speech production, Finnish-speaking children typically use nouns in just a single form. Count nouns preferably occur in the nominative, e.g. the parental names *äiti* 'mother' and *isä* 'father', names of body parts, such as Tuulikki's *nenä* 'nose' at 1;4 and *mas(s)u* 'tummy' at 1;8, or names of animals (*hauva* 'bow-wow', *heppa* 'gee-gee' etc.) and common nouns referring to people such as Tuulikki's *vauva* 'baby' and *tyttö* 'girl' at 1;3. Early nominatives of Tuomas are *auto* 'car' at 0;10, and the phonetically variable *pa(a)ppa* ~ *bappu* ~ *bäppy* 'ball' at 1;0.

Uncountable nouns first occur in the partitive. Tuulikki's first partitives were rote-learned expressions connected with eating routines: *puuvo-o* 'porridge-PARTIT' (= some porridge) at 0;11, *pulla-a* 'bun-PARTIT' (= some buns) at 1;0, and *tet-tä* (< *vet-tä*) 'water-PARTIT' (= some water) at 1;3. The first partitives of Tuomas were much alike: 0;8 *tet-tä* (< *vet-tä*) 'water-PARTIT' (= some water), and 0;10 *puuvo-o* 'porridge-PARTIT' (= some porridge). At the ages given, the partitive forms of these lemmas were not yet opposed to the nominative.

The next cases to emerge in both children's speech were the illative (especially forms with the allomorph *-Vn*) and a form suffixed by *-n* which can either function as a genitive or as an accusative. Typically, the first local case forms of the two subjects studied in this paper and of Finnish-speaking children in general

are adverblike (cf. 3.2.4), so that the children may not be aware of the fact that these forms are inflected for certain cases and that they function as frozen forms in their speech. In this early period, the children use inflected forms of nouns as unsegmented chunks or *gestalts*.

The very first partitive and illative forms have a clear connection to psychosocial development since they serve children's primary needs: with the partitive forms, they ask for a number of different things, for example food; with the illative forms, they express the wish to get somewhere (e.g. *koti-in* = *koti* 'home-ILL' (= let's go home)) or to get something some place (e.g. *to-hon* for Standard Finnish *tuo-hon* 'that-ILL' (= over there), meaning 'put it over there').

The genitive-accusative is the first form to be systematically contrasted with the inflectionally unmarked basic form, the nominative. There is some variation as far as the early marking of the genitive-accusative is concerned: While some children concentrate on the suffix *n* and do not observe stem alternations (e.g. Tuomas 1;8 *ukko* 'old man' : *ukko-n* 'old man-GEN' vs. the standard genitive *uko-n* with quantitative gradation *kk* : *k*), other children may concentrate on stem alternation and omit the suffix. Thus, Tuulikki's early genitives are marked with quantitative gradation at the age of 1;7, e.g. *lappu* 'bib' : *lapu* 'bib:GEN' vs. the standard genitive *lapu-n* 'bib-GEN'. (Note that in Finnish there is quantitative gradation of stops, namely *kk* : *k*, *pp* : *p*, *tt* : *t*, besides different types of qualitative gradation, e.g. *p* : *v* as in *leipä* 'bread' : *leivä-n* 'bread-GEN', *t* : *d* as in *äiti* 'mother' : *äidi-n* 'mother-GEN', *k* and loss as in *maku* 'taste' : *mau-n* 'taste-GEN' etc.).

3.2.3. The suffix variants of the first case forms: the trochaic tendency

This section is based on the diary data of both children from the very beginning of speech production. The suffix variant of the first rote-learned partitives in Tuulikki's speech is mostly vowel lengthening, which is a colloquial variant of the partitive suffix *-A* and is also frequently used by Tuulikki's and Tuomas's parents:

- (6) a. Tuulikki 1;5 *mehu-u* (< *mehu-a*)
juice-PARTIT
'some juice'

In stems ending in *A*, the standard suffix is identical with vowel lengthening, as in

- b. Tuulikki 1;5 *hyvä-ä*
good-PARTIT
'(this tastes) good'

- c. Tuulikki 1;6 *kuuma-a*
hot-PARTIT
'(this is) hot'
- d. Tuulikki 1;6 *leipä-ä*
bread-PARTIT
'some bread'

In monosyllabic stems and consonantal stems the suffix is *-tA*:

- e. Tuulikki 1;3 *tä-tä*
this-PARTIT
'this kind of (food)'
- f. Tuulikki 1;7 *uut-ta*
new-PARTIT
'something new'
- g. Tuulikki 1;7 *lien-tä*
soup-PARTIT
'some soup'

When first using the partitives *uutta* and *lientä* at 1;7, Tuulikki repeated them several times together with the respective nominative forms (*uusi* 'new' : *uut-ta* and *liemi* 'soup' : *lien-tä*) as if pondering about how they might be related to each other.

The first rote-learned partitives of Tuomas have the same variants as his sister's, namely *-A* ~ *-V* in two-syllabic nouns and *-tA* in monosyllabic nouns and consonantal stems.

A phenomenon typical of early child language is the so-called trochaic stage, which restricts the concatenation of suffixes. This stage is not only observed with the two children studied in the present paper but can be observed with children acquiring Finnish more generally. In the trochaic stage, bisyllabic word forms are preferred (Räisänen 1975: 256; Laalo 1994, 2001; Savinainen-Makkonen 2000; cf. Wijnen, Krikhaar, and Den Os 1994; Gerken 1994). There are also some four-syllabic, prosodically compound-like forms such as *elepantti* 'elephant' (Räisänen 1975: 256) and Tuulikki's *ala-antti* < *kameleontti* 'chameleon' (at 1;8) consisting of two consecutive trochee feet. The preference for trochaic patterns may lead to the shortening of standard word forms in the following way: The initial syllable, which bears the main stress and is accordingly prosodically salient, and the second syllable, which belongs to the same trochaic foot, are preserved while the other syllables are deleted (e.g. Tuulikki's 1;5 *ikkuna* 'window' > *ikku*,

1;7 *molemmat* ‘both’ > *mole*, 1;7 *patteri* ‘radiator’ > *patte*). Sometimes the second and third syllables are merged (e.g. Tuulikki’s 1;8 *puolukka* ‘lingonberry’ > *puukka*). The trochaic tendency was strong in Tuulikki’s speech but weaker in Tuomas’s although he also used trochaic shortenings such as *ikku* (< *ikkuna* ‘window’) at 1;5 and *api* (< *apina* ‘ape’) at 1;8.

Although using the salient nucleus of the word consisting of its first two syllables is quite effective for communicating lexical meaning, the preference for trochees imposes limitations on the development of inflection, and the use of morphological elements is accordingly restricted in this stage. By shortening word-forms to their relatively invariant initial parts, thereby leaving it to the extralinguistic and linguistic context to specify the attempted grammatical form, the trochaic tendency represents one way to cut the complexity of Finnish word forms down to their semantic essentials. This way the language becomes more manageable at a stage of development when the functions of the entire system of complex Finnish morphology with all its derivative and inflectional endings is only developing and far from having been mastered.

Truncated forms of nouns lacking suffixes are not the only ones to occur in the children’s speech during the trochaic stage, however. Both Tuulikki and Tuomas also use a special type of shortened partitive forms consisting of a truncated noun stem with the appropriate partitive suffix (-A or vowel lengthening) attached to it. A similar partitive based on a shortened stem is also mentioned in Toivainen (1980: 125): Ville 1;11 *bani-a* (< *banaani-a*) ‘banana-PARTIT’. Such forms based on truncated stems represent another strategy used by young children in their struggle to come to grips with word forms exceeding a certain length by reducing them to more manageable entities. Examples of trochaic truncations from Tuulikki’s data:

- (7) a. 1;6 NOM *bana* (< *banaani*) ‘banana’: PARTIT *bana-a*
 b. 1;8 NOM *appe* (< *appelsiini*) ‘orange’: PARTIT *appe-e*

Examples of trochaic truncations from Tuomas’s data:

- (8) a. 1;7 PARTIT *pipa-a* (< *pipari-a*) ‘bisquit-PARTIT’
 b. 1;8 PARTIT *puukka-a* (< *puolukka-a*) ‘lingonberry-PARTIT’

Besides endingless forms and partitives, Tuulikki uses (bisyllabic) illatives from as early as 1;5 onwards. In the input, the most frequent variant of the Finnish illative is *-Vn* (= vowel lengthening + *n*), but also in the input the final *n* is often weakened or dropped; the longer illative variant *-hVn* is used in monosyllables, and this suffix may be shortened to *-hV* in a similar way. Examples:

- (9) a. Tuulikki 1;6 *suu-hun*
mouth-ILL
'into the mouth'
- b. Tuulikki 1;7 *kuppi-i(n)*
cup-ILL
'into the cup'

Tuomas's first illatives have similar suffixes:

- (10) a. Tuomas 1;5 *tä-hä(n)*
this-ILL
'here'
- b. Tuomas 1;6 *kaappi-i(n)*
cupboard-ILL
'into the cupboard'

As with the early partitives, there are also often trochaic truncations to be found among the early illatives in Tuulikki's speech: a truncated noun stem carries the case suffix (examples 11). This is evidence that the child has noticed that illatives should have a long final vowel:

- (11) a. 1;7 *katti-i(n)* < *kattila-an*
saucepan-ILL
'into the saucepan'
- b. 1;8 *keitti-i(n)* < *keittiö-ön*
kitchen-ILL
'into the kitchen'
- c. 1;8 *työkkä-ä(n)* < *työkkäri-in*
[coll. shortening of *työhuonee-seen*]
workroom-ILL
'to the workroom'

Tuomas uses trochaic shortenings in the illative only occasionally, e.g. 1;7 *katti-in* < *kattila-an* 'saucepan-ILL' (= into the saucepan), but two months later he produces some illatives with the longer suffix *-seen*, e.g. 1;9 **kyypy-seen* (~ *kyypy-yn* < *kylpy-yn*) 'bath-ILL' (= into the bath) by analogy with *ammee-seen* 'bathtub-ILL' (= into the bathtub, nominative *amme*).

The first accusatives and genitives in Tuulikki's speech mostly contrast with the nominatives. In the beginning, Tuulikki uses forms functioning as genitive-accusative both with the *n*-suffix and without it. Thus, her first forms used in genitive or accusative contexts at the age of 1;7 have the following character-

istics: (a) They can be suffixless variants such as *lapu* (< *lapu-n* 'bib-ACC'), *meko* (< *meko-n* 'dress-ACC') distinguished from the nominatives *lappu* 'bib' and *mekko* 'dress' by consonant gradation or suffixless variants distinguished from the nominative by A ~ U alternation (e.g. *minu* 'I:GEN' vs. *minä* 'I:NOM'). The final *n* of genitive forms is also often weakened in Toivainen's data (1980: 141–142) so that the inflection is only signaled by stem alternation. (b) Forms functioning as accusatives and expressing the direct object can also carry the suffix *-n*, e.g. *kaike-n Tuuti söi* 'everything-ACC Tuuti ate' (= Tuuti ate everything), *tuti-n vie* 'the baby's dummy-ACC takes' (= takes the baby's dummy). There are also genitives ending in *-n* constructed with a postposition: *tori-n poikki* 'the market square-GEN across' (= across the market square), *leivä-n pää-lle* 'bread-GEN head-ALL' (= on the bread).

In contrast to his sister, Tuomas does not omit the case ending *-n* in accusative and genitive forms but at first ignores most stem alternations simply adding the suffix *-n* to the nominative stem, e.g. 1;8 *käsin* (for *käden* vs. NOM *käsi* 'hand') and 1;8 *ukkon* (for *ukon*, cf. NOM *ukko* 'old man'), *tyttön* (for *tyttö*, cf. NOM *tyttö* 'girl').

As can be seen from these examples, the two siblings use different strategies for producing nouns inflected for the genitive-accusative as opposed to the nominative. While Tuulikki pays attention to the overall differences between the two form classes, including stem alternation but sometimes ignoring the suffix *-n*, her brother produces the suffix, but does not observe gradation. The children studied in Toivainen (1980: 143–144) sometimes omit qualitative grade alternation, especially in the genitives of the kinship terms *äiti* 'mother', *setä* 'uncle' and *täti* 'aunt', but not quantitative grade alternation: *papan* 'Grandpa's' (vs. NOM *pappa*), *tytön* 'the girl's' (vs. NOM *tyttö*).

Tuulikki and Tuomas not only differ in the way they distinguish the genitive-accusative from the nominative but also in the functions to which they put their early genitives. Tuulikki's first genitives mainly link a noun to a postposition (e.g. *tori-n poikki* 'market square-GEN across' (= across the market square), whereas most of Tuomas's early genitives are possessive. While, at the age of 1;7, Tuulikki uses accusatives and linking genitives besides nominatives, her first possessive genitives are found at the age of 1;8. She uses them to indicate, for example, the possessors of different servings of porridge, e.g. *isi-n puuro* 'Daddy-GEN porridge' (= Daddy's porridge). Tuomas's first accusatives and possessive genitives occur at 1;8 and his first linking genitives at 1;9. The difference between the two children's development of the functions of the genitive can probably be explained by the fact that, being a second child, Tuomas has a greater need to express the possessive relation. This difference between first-born and younger siblings seems to be fairly common.

3.2.4. From local adverbs to productive use of local case forms

As far as the development of local expressions to be studied in this section is concerned, Finnish-speaking children at first use local adverbs marked for case as frozen forms. Thus, the first ablatives are typically local adverbs such as *tää-ltä* ‘from here’, *tuo-lta* ‘from over there’ and *sie-ltä* ‘from there’ and the first elatives belong to the adverbial type *tä-stä* ‘from here’, *tuo-sta* ‘from over there’, *mi-stä* ‘from where’ etc.

The first inessives used by Tuulikki are *mi-ssä* ‘what-INESS’ (= where) at 1;5, *tä-ssä* ‘this-INESS’ (= here) at 1;7, and *maa-ssa* ‘ground-INESS’ (= on the ground) at 1;8. In the trochaic stage, trisyllabic forms are shortened so that the inflection is marked only by stem alternations, e.g. grade alternation in 1;8 *vaipa* < *vaipa-ssa* ‘nappy-INESS’ (= in the nappy), cf. NOM *vaippa* ‘nappy’, or a combination of different alternations, e.g. 1;9 *käle* < *käde-ssä* ‘hand-INESS’ (= in the hand), cf. NOM *käsi* ‘hand’). This type of unspecified oblique forms decrease from the age of 1;10 on, when Tuulikki starts to use trisyllabic inessives besides bisyllabic ones: *käde-ssä* ‘hand-INESS’ (= in the hand, cf. NOM *käsi* ‘hand’), *möki-ssä* ‘cottage-INESS’ (= in the cottage, cf. NOM *mökki* ‘cottage’), *laatiko-ssa* ‘box-INESS’ (= in the box, cf. NOM *laatikko* ‘box’) etc.

As indicated above, Tuomas’s trochaic stage is less pronounced and shorter. Accordingly, he uses both di- and trisyllabic inessives from the very beginning, e.g. at 1;8 *to-ssa* ‘that-INESS’ (= over there), *nenä-ssä* ‘nose-INESS’ (= in the nose), *puu-ssa* ‘tree-INESS’ (= in the tree); at 1;9 *auto-ssa* ‘car-INESS’ (= in the car), *kaapi-ssa* ‘cupboard-INESS’ (= in the cupboard), *kuva-ssa* ‘picture-INESS’ (= in the picture).

Since the consonant cluster of the elative suffix *-sta* is articulatorily demanding, it is often assimilated to *-tta* in early child language. Because the inessive suffix *-ssa* is often changed to *-tta* in early child language, the suffixes of the elative and the inessive may coincide. This may be one of the reasons why Tuulikki occasionally uses different strategies to express the elative function in an unambiguous way. One such strategy is the use of periphrastic constructions such as the adposition (also adverb) *pois* ‘away’ combined with a noun unmarked for case:

- (12) Tuulikki 1;9 *suihku pois* (< *suihku-sta*)
 shower away (< shower-ELAT)
 ‘from the shower’

Another strategy for expressing the elative used by both children is the same as that already encountered with some early genitive-accusatives, namely a suf-

fixless stem form with stem alternation, either gradation (*laatiko* < *laatiko-sta* ‘box-ELAT’ (= from the box) vs. NOM *laatikko*) or alternation of the final stem vowel (*kuole* < *kuore-sta* ‘shell-ELAT’ (= from the shell) vs. NOM *kuori*). The underspecified expression of location by use of the suffixless oblique form of the noun stem is also found in Tuomas’s data, e.g. 1;8 *polve* for adessive *polve-lla* ‘knee-ADE’ (= on the knee) vs. NOM *polvi*. In such utterances, the specific locative relation must be inferred from the context.

Sometimes the adposition *pois* does not replace synthetic case marking in the children’s speech but marks the elative function more clearly by expressing it both synthetically and periphrastically, just as in the redundant expressions of adult Finnish. The adposition may also clarify the case function when the case suffix is obscured by phonetic changes:

- (13) a. Tuulikki 1;10 *pois suu-tta* (< *suu-sta*)
away mouth-ELAT
‘out of the mouth’
- b. Tuulikki 1;10 *pois tuoli-tta* (< *tuoli-sta*)
away chair-ELAT
‘off the chair’
- c. Tuomas 1;9 *konee-tta pois* (< *konee-sta*)
machine-ELAT away
‘away from the machine’

The functions of the external local cases are often first expressed by adverbs, e.g. Tuulikki 1;5 *tuo-l(l)a* (that-ADESS ‘over there’), 1;6 *tää-llä* (this-ADESS ‘over here’). The onset /lt/ of the suffix of the external FROM-case ablative is articulatorily demanding and is often simplified to single *t* (14a, 14b) or geminate *ll* (14c). The adposition *pois* ‘away’ is occasionally used in constructions with the ablative function for similar reasons as with the elative. By simplification of the consonant cluster of the suffix the ablative may become homophonous with the partitive or the adessive in the children’s speech; in order to distinguish the ablative from the partitive (14a, 14b) or from the adessive (14c) or to clarify the case function of the bare stem (14d) the children may add the adposition *pois*:

- (14) a. Tuulikki 1;8
pois pää-tä (< *pää-ltä*, cf. PARTIT *päättä*)
away head-*ABL
‘take off’

- b. Tuomas 1;8
pois tie-tä (< *tie-ltä*, cf. PARTIT *tietä*)
 away way-*ABL
 ‘out of the way’
- c. Tuomas 1;10
patta-lla (< *patja-lta*, cf. ADESS *patjalla*) *pois*
 mattress-*ABL away
 ‘off the mattress’
- d. Tuulikki 1;9
pois pöylä (< *pöydä-ltä*, cf. NOM *pöytä*)
 away table (< table-ABL)
 ‘from the table’

The order of development of the local case suffixes found in the data of Tuulikki and Tuomas is also attested in other Finnish-speaking children. Thus, Toivainen (1980: 160–163) presents the following serial order of acquisition of the local case forms based on data from 25 Finnish-speaking children aged 1–3 years and defined by the age of the median child:

- adessive adverb (e.g. *tää-llä* ‘here’)
- illative nominal
- inessive adverb (e.g. *mi-ssä* ‘where’)
- allative adverb (cf. the "sublatives", e.g. *mi-nne* ‘where to’)
- adessive nominal
- inessive nominal
- allative nominal
- elative adverb (e.g. *mi-stä* ‘from where’)
- illative adverb (e.g. *mi-hin* ‘where to’)
- ablative adverb (e.g. *sie-ltä* ‘from there’)
- elative nominal
- ablative nominal

It is interesting to note that with the exception of the illative local cases first emerge in deictic local adverbs. The different behaviour of the illative may be explained by the fact that many of the first illatives to occur in child speech do not correspond to established particles in the standard language so that there is some lexical variation here. Nevertheless, the early nominal illatives are used in much the same way as local adverbs, e.g. *syli-in* ‘into the lap’ (cf. NOM *syli* ‘lap’) and *koti-in* ‘home’ (cf. NOM *koti* ‘home’), which first occur as frozen forms of nouns in our data; there are also adverbs such as *muka-an* ‘along’ (cf.

Table 1. Tuulikki's local case forms in the early diary data (types)

Age	Illative	Inessive	Elative	Adessive	Allative	Ablative
1;5	6	1 ADV	–	1 ADV	–	–
1;6	6	1 ADV	–	1 ADV	–	–
1;7	8	2 ADV	1 ADV	1 ADV	2 ADV	–
1;8	22	4	2	2 ADV	2 ADV	1 ADV
1;9	20+	6	5	3	3	3
1;10	20+	18	10	16	14	3
1;11	20+	9	8	12	12	5

muka-na 'with', a frozen essive form of the same stem) among the first illatives. There is no clear-cut boundary between the use of these early frozen forms and the productive nominal use of local cases: As the child acquires more word forms, the different suffixes become more familiar and the means of expressing location synthetically develop. The early development of Tuulikki's local cases is presented in table 1.

Illatives are already used in 6 lemmas at the age of 1;5, and at the age of 1;8 illatives occur in as many as 22 lemmas. After that, the diary notes about illatives are no longer comprehensive. The first inessives (*mi-ssä* 'where') and adessives (*tuo-lla* 'over there') which occur between 1;5 and 1;6 are adverbs and so are the first elatives (1;7), allatives (1;7) and ablatives (1;8). There is a spurt in the use of local case suffixes with different lexemes between 1;9 and 1;11. After that, the diary notes no longer focus on this topic. Nevertheless, the figures show that the early item-based categories develop into more general inflectional schemas: While the child first uses some adverbs carrying certain case endings, later on she starts to use these case suffixes with more and more lexical stems.

3.2.5. Marginal cases

The marginal cases are the last case forms to emerge because of their low frequency in the input. There are only a few abessives, instructives and comitatives in the data. The use of these cases will be demonstrated by a number of selected examples from the diaries of the two children.

In Tuulikki's diary data, the first abessives are nominalized forms of verbs, namely forms of the *mA*-infinitive:

- (15) Tuulikki 2;9 *jätä-n se-n syö-mä-ttä*
 leave-1S it-ACC eat-INF-ABESS
 'I leave it uneaten' (= I won't eat it)

Tuulikki's first instructives are common Finnish frozen forms, e.g. 1;11 *käs-i-n* (hand-PL-INSTRUC) 'by hand', 3;7 *kyns-i-n* (nail-PL-INSTRUC) 'by using nails'. Tuulikki also produced a few instructive forms of her own:

- (16) Tuulikki 4;2 *suur-i-n* *tömistyks-i-n*
big-PL-INSTRUC loud.step-PL-INSTRUC
'with big, loud steps'

Tuomas was not as innovative as his sister in this respect, so that his instructives rather belong to conventional Finnish phraseology as in the following example based on the word *voima* 'force':

- (17) Tuomas 2;9 *yhteis.voim-i-n*
joint.force-PL-INSTRUC
'with joint forces'

The comitative *kenk-i-ne-en* 'with the shoes' (cf. NOM SG *kenkä* 'shoe') used by Tuulikki demonstrates a feature typical of colloquial Finnish, namely substitution of the first person possessive suffix by the third person:

- (18) Tuulikki 3;4
mä kulje-n kenk-i-ne-en ulko-na
I walk-1S shoe-PL-COM-POSS3 out-ESS
'I walk outside with the shoes on'

A Standard Finnish comitative form is *ruotoineen* in:

- (19) Tuulikki 4;0
oikea-t hylkee-t syö-vät ruoto-i-ne-en
real-PL seal-PL eat-3P bone-PL-COM-POSS3
'real seals eat (fish) with its bones'

The first comitatives found in Tuomas's diary data are found in a playing situation where he speaks about a toy train:

- (20) Tuomas 3;2
tunnele-i-ne-en ja silto-i-ne-en
tunnel-PL-COM-POSS3 and bridge-PL-COM-POSS3
'with its tunnels and bridges'

It is interesting to note that in Toivainen's (1980) audiotaped data of 25 children between 1;0 and 3;0 there are no examples of instructive, comitative or abessive

forms. This is not surprising since the marginal cases are infrequent in early child speech so that quite intensive recordings would be required in order to document them; in my own recorded material there is only one instructive form (see section 5.3).

3.2.6. Summary of case development in the light of the diary data

The very first occurrences of the case forms have been registered in the diary data. This data represents the overall development of the children quite faithfully: The first cases to emerge are the grammatical ones, followed by local cases and finally by marginal cases. The cases first emerge as item-based categories but gradually develop into more general inflectional schemas.

Diary data enable the researcher to make interesting qualitative observations. If the material is collected regularly, the emergence of the very first inflectional forms, various special forms, different analogies and many infrequent forms can be registered (see section 4 for the examination of certain interesting phenomena). A well-known weakness of diary data is that the focus is on novelties while most of the established forms are not registered. Thus a quantitative analysis would be unrewarding. Accordingly, the use of the local case suffixes is documented quite exhaustively in Tuulikki's diary data till the age of 1;10 but not after that age. In what follows, the analysis of diary material will be complemented by the analysis of the audiotaped data.

3.3. The development of singular case forms from 1;7 to 2;10: audiotaped data

In this section, the analysis of the case development is supplemented by the quantitative analysis of the audiotaped data. The period of tape recordings partially overlaps with that of the diaries. While the diaries were kept from the very first words produced by the children with a gradual decrease of their intensiveness as time went on, the tape recordings started for Tuulikki at the age of 1;7 and for Tuomas a little earlier, although useful speech samples of the boy actually also date only from 1;7 on.

An overview of singular case forms of nouns found in both children's tape recordings between the ages of 1;7 and 2;10 for Tuulikki and between 1;7 and 2;2 for Tuomas are presented in tables (2a) and (2b), respectively (case forms based on pronominal stems have been excluded; for plural forms of nouns see section 5 below).

Table 2a. Singular case forms of nouns in the early recordings of Tuulikki (types/tokens): grammatical and local cases

Age	Grammatical cases				Local cases					
	NOM	PARTIT	GEN	ACC	ILL	INESS	ELAT	ALL	ADESS	ABL
1;7	35/60	8/11	1/2	3/3	10/18	–	–	–	–	–
1;8	45/117	12/23	7/11	3/6	14/29	–	–	–	–	–
1;9	37/83	15/21	6/16	2/2	6/11	–	–	–	–	–
1;10	10/35	5/12	3/6	–	3/6	–	–	(1/2)	(1/1)	–
1;11	19/59	1/5	3/9	1/1	2/2	1/1	–	4/5	1/1	1/3
2;1	44/90	5/5	3/3	1/1	6/9	6/12	1/1	2/2	7/8	–
2;2	47/85	9/11	3/7	2/2	2/3	1/1	–	3/6	–	–
2;3	47/86	6/7	2/2	3/4	2/2	1/1	1/1	1/1	10/17	–
2;4	32/51	4/4	2/3	4/5	2/4	1/1	1/1	1/1	8/11	–
2;5	29/56	9/9	4/4	2/2	2/2	9/11	–	–	–	–
2;6	26/37	6/8	3/3	3/3	5/6	1/2	–	3/5	1/1	1/1
2;8	37/71	10/12	4/6	1/2	7/12	1/1	2/5	1/1	4/4	1/1
2;9	30/47	11/13	1/1	1/1	7/16	6/7	2/2	4/4	1/1	1/1
2;10	47/60	16/22	6/6	5/5	10/14	4/4	4/5	1/1	1/1	–

Table 2b. Singular case forms of nouns in the early recordings of Tuomas (types/tokens)

Age	Grammatical cases				Local cases					
	NOM	PARTIT	GEN	ACC	ILL	INESS	ELAT	ALL	ADESS	ABL
1;7	33/201	–	–	–	1/2	–	–	–	–	–
1;8	45/133	8/26	3/5	1/2	7/8	–	1/1	–	–	–
1;9	51/149	14/41	8/33	2/2	5/12	1/1	1/1	3/4	2/5	1/1
1;10	16/70	6/10	6/6	–	5/13	1/1	1/1	1/1	–	–
1;11	23/32	5/7	2/2	–	1/1	2/5	–	1/1	–	–
2;0	25/54	1/1	1/1	3/3	5/7	1/1	1/2	–	2/2	–
2;1	16/26	–	2/3	1/1	3/3	2/5	2/2	2/3	3/7	–
2;2	38/96	5/6	5/11	2/2	3/5	8/11	1/2	–	8/10	–

In the recordings, especially nominative and partitive occur very frequently, but genitive and accusative forms are also regularly used from the first recording on by Tuulikki; with Tuomas, the genitive is in constant use from 1;8 on.

The illative is the only local case occurring since the first recording. In the early recordings, illatives are used frequently for different reasons: at 1;7, picture books are looked at and afterwards they are then stacked (*pino-on* ‘stack/pile-ILL’); in a pretend game played at 1;8, tea and coffee are poured into the cups of various real and imaginary persons (*kuppi-in* ‘cup-ILL’). During this early period, allatives are sometimes replaced by illatives (4 tokens at 1;8; cf. section

4.2). The very first allative form in Tuulikki's recordings is *pää-lle* 'head-ALL' (= onto) and the first adessive is the postposition *a-lla* 'under-ADESS' in *tyyny-n a-lla* 'pillow-GEN [particlestem]-ADESS' (= under the pillow), both occurring at 1;10. It must be pointed out, however, that such forms are fossilized forms in the adult language as well. The first allatives properly speaking emerge at 1;11 in Tuulikki's data. When allatives emerge and start to function as TO-cases at the age of 1;10 and 1;11, the number of illatives decreases temporarily.

In spite of the fact that other local cases occur less frequently in the recorded data, there is considerable lexical variation from one month to the next so that given case forms are not mere repetitions but occur with different lemmas: there are allatives such as 1;11 *hylly-lle* 'shelf-ALL' (= on the shelf, local function), 1;11 *äidi-lle* 'mother-ALL' (= to the mother, beneficiary function), 2;3 *isi-lle* 'father-ALL' (= to the father, beneficiary), 2;4 *ove-lle* 'door-ALL' (= to the door, local function); elatives such as 2;1 *peiko-sta* 'troll-ELAT' (= from the troll), 2;3 *talli-sta* 'stable-ELAT' (= from the stable); inessives such as 1;11 *alu-ssa* 'beginning-INESS' (= at the beginning), 2;4 *auto-ssa* 'car-INESS' (= in the car) etc. There are also oppositions of local case forms of one and the same lemma. These and miniparadigms more generally will be analyzed in section 6 below.

The general local cases translative and essive also show lexical variation. Between 2;1 and 2;9, there are many translatives but only two essives: 2;1 *karhu-ksi* 'bear-TRANSL', 2;5 *isi-ksi* 'father-TRANSL', *kilti-ksi* 'good-natured-TRANSL', 2;6 *iso-ksi* 'big-TRANSL', *onne-ksi* 'luck-TRANSL', 2;8 *joululahja-ksi* 'Christmas present-TRANSL', *suoja-ksi* 'protection-TRANSL', 2;9 *jatko-ksi* 'addition-TRANSL'; 2;4 *paljaa-na* 'naked-ESS' and 2;8 *joululahja-na* 'Christmas present-ESS'.

The only occurrences of the marginal cases abessive (at 2;10 *huole-tta* 'worries-ABESS' (= free from worries)) and instructive (at 2;10 *käs-i-n* 'hands-INSTRUC' (= by hand)) are lexicalized expressions also in Standard Finnish.

In addition to local case forms of noun stems there are also local adverbs based on pronominal stems (e.g. *tä-ssä* 'this-INESS' (= here), *tää-ltä* 'this-ABL' (= from here)). Due to their transparent form and high frequency of occurrence such adverbs may serve as important models for both the form and use of local cases.

Turning to the tape-recorded data of Tuomas's, the distribution of the boy's first case forms is much the same as that of Tuulikki's: The grammatical cases are well represented in the data. Although there are tokens of all local cases from 1;9 on, the earliest one to emerge and the most frequently used is the illative. The role cases essive and translative only appear at the age of 2;2.

As has been found with Tuulikki, there is considerable lexical variation in the local cases also in Tuomas's speech. Thus, the first elatives are *kupi-sta* 'cup-

ELAT' (= from the cup) at 1;8, *konee-sta* 'machine-ELAT' (= from the machine) at 1;9, and *ikkuna-sta* 'window-ELAT' (= from the window) at 1;10; the first inessives are *isä-ssä* 'father-INESS' (= in the father) at 1;9, *kaapi-ssa* 'cupboard-INESS' (= in the cupboard) at 1;10, as well as *tuoli-ssa* 'chair-INESS' (= in the chair) and *reuna-ssa* 'edge-INESS' (= on the edge) at 1;11. This is evidence that these early relatives and inessives are unlikely to be frozen forms. More evidence comes from data demonstrating that the respective lemmas do not only occur in these case forms but also at least in one other form, see e.g. table 7 in section 6 for *kuppi* at 1;8.

With both children, local cases not only express local relations, but especially the adessive also serves other functions such as use of a vehicle or an instrument (e.g. Tuulikki at 1;11 *bussi-lla* 'bus-ADESS' (= by bus), Tuomas at 2;1 *laiva-lla* 'boat-ADESS' (= by boat) and at 2;2 *auto-lla* 'car-ADESS' (= by car), *avaime-lla* 'with a key') or the possessor (e.g. Tuulikki at 2;1 *isi-llä* 'in father's possession', *kaveri-lla* 'in the pal's possession'). Besides a local meaning, the allative may also convey a beneficiary role (e.g. Tuulikki at 1;11 and Tuomas at 2;1 *äidi-lle* 'to the mother', Tuomas at 1;9 *nalle-lle* 'to the teddy bear').

The tape-recorded data of the two subjects studied in the present paper not only allow the study of frequency distribution of case forms but also to determine the decreasing percentage of base forms of nouns (PBF) in the course of development. The PBF measure (Percentage of Base Forms) established by Voeikova and Gagarina (2002) may thus be used as a measure of children's inflectional development.

In Finnish, inflectionally unmarked base forms of nouns are identical with the nominative singular. In adult-directed (spoken and written) adult Finnish, PBF amounts to a little more than 30% of noun tokens (Hakulinen et al. 2004: 1179). In Tuulikki's input, PBF is 57% at 1;8 and drops to a nearly 35% at 2;9; the corresponding values for Tuomas are similar, namely 56% at 1;7 and 33% at 2;2. Thus, PBF is much higher when parents speak to children in the second half of their second year often participating in naming acts than when addressing themselves to them in their third year.

Tuulikki's PBF rates stay more or less close to the input rate characteristic of her youngest age. Although there is no evidence for a steady drop of PBF values between the beginning and the end of the observational period, PBF reduces to about 41% at 2;6 and stabilizes at this level during the last two months of observation (table 3a).

Although Tuomas's early PBF rates are much higher than Tuulikki's, he reaches roughly the same level as his sister by 1;9. The first drop of PBF below 50% occurs five months earlier with the boy than with the girl (table 3b).

Table 3a. Percentage of base forms of nouns (PBF) in Tuulikki's transcripts

Age	Utterances	MLU	SG NOM	SG OBL	PL	All nouns	PBF
1;7	144	1.554	60	34	9	103	58.25
1;8	304	1.599	117	69	3	189	61.90
1;9	219	2.324	83	54	4	141	58.86
1;10	76	2.763	35	24	2	61	57.38
1;11	309	2.401	59	27	3	89	66.29
2;1	561	3.075	90	42	20	152	59.21
2;2	293	2.232	85	30	11	126	67.46
2;3	206	2.932	86	35	26	147	58.50
2;4	358	2.366	51	31	16	98	52.0
2;5	173	3.329	56	30	26	112	50.0
2;6	160	3.369	37	32	21	90	41.11
2;8	359	3.304	71	47	16	134	52.98
2;9	207	3.343	47	47	20	114	41.23
2;10	315	3.800	60	60	26	146	41.1

Table 3b. Percentage of base forms of nouns (PBF) in Tuomas's transcripts

Age	Utterances	MLU	SG NOM	SG OBL	PL	All nouns	PBF
1;7	215	1.535	201	2	–	203	99
1;8	403	1.355	133	42	1	176	76
1;9	186	1.548	149	100	13	262	57
1;10	167	1.754	70	32	1	103	68
1;11	124	1.774	32	16	11	59	54
2;0	120	2.325	54	17	27	98	55
2;1	135	2.541	26	24	5	55	47
2;2	435	3.278	96	53	43	192	50

Summarizing the quantitative analysis of the singular case forms occurring in the tape-recorded data, the grammatical cases – and foremost the inflectionally unmarked nominative singular – are by far the most important ones as far as their frequency of occurrence is concerned. Tuulikki's transcripts give evidence of a more steady use of the other grammatical cases besides the nominative singular than the boy's. The illative is the only local case to be found in every recording of both children. As far as the other local cases are concerned, those occurring are often represented by a single token only. The role cases *essive* and *translative* emerge rather late with both children, namely at 2;1 and 2;2, and there are no more than a few tokens of each of them. The marginal cases *instructive* and *abessive* are limited to Tuulikki's speech sample gathered at 2;10 and are only represented by a single token each.

In order to demonstrate the development of the inflectional system of the noun more stringently, paradigm formation of noun lemmas documented by the tape-recorded data will be analyzed in section 6 below.

4. Creative use of singular case forms by the two children

In Finnish child language, there are deviations from the norms of the standard language both in the morphological construction of certain case forms and their use. As will be demonstrated in this section, there are also some interesting deviations from the typological features of Finnish inflectional morphology to be noted in early child speech. One of the main tasks in the acquisition of Finnish is mastery of the complex interplay between stem forms and suffixes in the inflectional system due to the great number of inflectional classes and the rich allomorphy of suffixes. It is not surprising that in the early stages of the acquisition of Finnish inflection, children will use different strategies for simplifying this complex task. Thus, Tuomas first uses a suffix-based strategy concentrating on the endings of inflected forms while ignoring qualitative and quantitative stem alternations even when these alternations are quite salient. In contrast, Tuulikki first concentrates on stem alternations (either qualitative vowel alternations or grade alternation of consonants; see sections 3.2.3 and 3.2.4 above) marking unspecified oblique forms which lack specific case suffixes so that the hearer must refer to the context in order to disambiguate these vague forms.

In this section, formal as well as functional deviations of cases from Standard Finnish occurring in early child speech will be studied. It will be seen that the early child system of case forms may be underdifferentiated as compared to that of the adult language.

4.1. Analogical partitives

While the functions of the partitive are mastered quite well from the very beginning, its forms are not. There are different analogical tendencies to be found in children's construction of partitives. One such characteristic is double case marking, e.g. *piha* 'yard' : correct partitive *piha-a* : double partitive **piha-a-ta*, and *vesi* 'water' : correct partitive *vet-tä* 'some water' : double partitive **vet-tä-ä*. It must be noted, however, that doubly marked partitives also occur in adult speech. Some double partitives occur in negated forms of certain phrases which already include a partitive for other reasons and where the negation is emphasized by using a second, contrasting partitive, e.g. *ei mon-ta-a* 'not many'

(cf. *moni* ‘many’, partitive *mon-ta*), *ei kah-ta-a kerta-a* ‘not twice’ (cf. *kaksi* ‘two’, partitive *kah-ta*; in this expression, the possible syntagmatic influence of the immediately following partitive *kerta-a* ‘time, occasion, turn’ must also be taken into consideration).

Among the analogical child partitives there are also some transparent ones based on the final stem vowel /e/ of vocalic stems rather than the more opaque final consonant of consonantal stems, e.g. Tuulikki’s *lume-e* ‘some snow’ (Standard Finnish *lun-ta*, cf. NOM *lumi* ‘snow’, oblique stem *lume-*) at 1;7 and *tois-ta* [toitta] *puole-e* ‘the other side’ (Standard Finnish *tois-ta puol-ta*, cf. NOM *puoli* ‘side’, oblique stem *puole-*) at 1;9. This type of transparent partitives becomes rather frequent from 2;0 onwards.

4.2. Forms and functions of the illative

In the early stages of language acquisition, Finnish-speaking children tend to replace the longer allomorphs *-hVn*, *-seen*, *-siin* of the illative suffix by its short allomorph *-Vn*, which also has the highest input frequency among these allomorphs. Another simplification found with children acquiring Finnish concerns shortening of the stem of certain (contracted) nouns both in the partitive and the illative (Räisänen 1975: 256–257, Niemi and Niemi 1985: 159–160, Laalo 1998: 374–375). An example from Tuulikki’s speech between 1;8–1;10 is the illative *laste.huone-e(n)* < *lasten.huonee-seen* ‘children’s room-ILL’ (= into the children’s room).

Another tendency found in child language is the use of the illative suffix *-Vn* instead of the allative suffix *-lle* (see section 3.1 above). With Tuulikki, this tendency lasted for several months and was most pronounced between 1;8 and 1;10 (see (21)).

- (21) a. 1;8 *nalle hyppä-ä patja-an*
teddy jump-3S mattress-ILL
‘the teddy bear is jumping in the mattress’
(for allative *patja-lle* ‘on the mattress’)
- b. 1;9 *pöytä.niina-a(n) puto*
table.cloth-ILL *fall-PAST (truncated from *putosi*)
‘fell in the tablecloth’
(for allative *pöytä.liina-lle* ‘on the tablecloth’)

There are similar examples from Tuomas between 1;8 and 1;10:

- (22) a. 1;8 *puukka-a* (< *puolukka-a*) *lettu-un*
 lingonberry-PARTIT pancake-ILL
 ‘put some lingonberry into the pancake’
 (for allative *letu-lle* ‘on the pancake’)
- b. 1;9 *toise-en* *rasva-a* [vahvaa]
 another-ILL butter-PARTIT
 ‘[put some] butter to the other [slice of bread]’
 (for allative *toise-lle* ‘on the other’)
- c. 1;10 *puto-s* *lattia-a(n)*
 fall-PAST floor-ILL
 ‘fell in the floor’ (for allative *lattia-lle* ‘on the floor’)

While the allative is often replaced by the illative in early child language, the opposite happens only exceptionally. Thus, Tuomas replaces the illative by the allative only once at 1;9.

Possible explanations for children’s preference of the illative rather than the allative are both functional and formal. While the illative is a communicatively important purely local case (cf. 3.2.2), the allative has other functions besides the local one, the most important of them being the beneficiary. Illative forms with a suffix consisting of the lengthening of the last stem vowel + *n* fit the trochaic pattern favoured in early child Finnish (cf. section 3.2.3), whereas the allative violates this pattern by adding another syllable to the word.

One more reason why the illative is preferred to the allative in early child Finnish is that from early on children often encounter expressions such as *jalka-an* ‘foot-ILL’ (cf. *jalka* ‘foot:NOM’) or *käte-en* ‘hand-ILL’ (cf. *käsi* ‘hand:NOM’) during their daily dressing routines when something is to be put on the foot, leg or hand (rather than ‘into’ it). These forms occur in expressions such as *puetaan housut ~ kengät jalka-an* ‘let’s put the trousers ~ shoes on the leg/foot’ or *puetaan lapaset käte-en* ‘let’s put the mittens on the hand’. As a result, both *jalkaan* and *käteen* are also used early by the children themselves. Since the illative is used in the function of external rather than internal local TO-cases in such contexts, it is this phraseological use that may influence the children’s own use of the illative.

In a cross-linguistic perspective, a comparable tendency to favour inner local cases at the expense of outer ones has been found in Hungarian child language. In the data studied by Pléh, Vinkler, and Kálmán (1997) two thirds of all local case markers belong to inner local cases. Furthermore, according to Dasinger (1997: 40–42), the illative is one of the most salient local cases.

The development of the allative differs from that of the illative and the other local cases because the allative suffix is the only local case suffix which does not occur in adverbs, but is replaced by the suffix *-nne* instead. Consequently, in contrast to other local case forms, the children do not become trained by allative adverbs to use the allative suffix.

5. The plural

5.1. The Finnish plural

In the nominative plural and the homophonous accusative plural form, plurality is marked by the suffix *t*, immediately attached to the singular stem, e.g. *silmä* 'eye' : *silmä-t* 'eye-PL:NOM', *pallo* 'ball' : *pallo-t* 'ball-PL:NOM'. In the oblique cases, the case suffix follows the plural suffix, which is *-i-* or *-j-* (in intervocalic position), e.g. *silm-i-ä* 'eye-PL-PARTIT', *pallo-j-a* 'ball-PL-PARTIT'.

In the plural, nominal stems are subject to certain morphophonological alternations. While rounded stem-final vowels (*o*, *u*, *y* or *ö*) remain unchanged before the plural suffix *ilj* (e.g. *pallo-j-a* 'ball-PL-PARTIT', *pallo-i-ssa* 'ball-PL-INESS') unrounded ones (*e*, *i*, *a*, *ä*) either change (see below) or are deleted. The stem-final vowels *e* and *ä* are always deleted but stem-final *a* only deletes when the first stem vowel is rounded (see (23)), otherwise it changes (see below).

- (23) *e*-stems: *nimi* 'name' :
 nime-t 'name-PL:NOM' : *nim-i-ä* 'name-PL-PARTIT'
ä-stems: *silmä* 'eye' :
 silmä-t 'eye-PL:NOM' : *silm-i-ä* 'eye-PL-PARTIT'
a-stems with a rounded first vowel: *muna* 'egg' :
 muna-t 'egg-PL:NOM' : *mun-i-a* 'egg-PL-PARTIT'
 (vs. *jalka* 'leg' : *jalko-j-a* 'leg-PL-PARTIT')

Stem-final vowel changes occurring in oblique plural forms are the following: Stem-final *a* dissimilates to *o* after an unrounded first stem vowel (e.g. *jalka* 'leg' : *jalko-j-a* 'leg-PL-PARTIT'). Stem-final *i* becomes *e* before the plural suffix *ilj* (e.g. *greippi* 'grapefruit' : *greippe-j-ä* 'grapefruit-PL-PARTIT' : *greippe-i-hin* 'grapefruit-PL-ILL'). Stem-final long vowels and diphthongs are shortened (e.g. *maa* 'land' : *ma-i-ta* 'land-PL-PARTIT', *vapaa* 'free' : *vapa-i-ta* 'free-PL-PARTIT', *suo* 'swamp' : *so-i-ta* 'swamp-PL-PARTIT'). As will be shown below, the complex morphophonology of plural forms leads to analogical formations in child Finnish.

While plural stem formation of certain noun types is complex, plural case formation is relatively simple, because most case suffixes are identical in the singular and the plural.

As noted in section 2.1, the nominative singular can be considered as the basic form of most Finnish nominals representing the lemma and occurring most frequently in Finnish speech. Plural case forms, including the nominative, are not as frequent as the corresponding singular ones. The nominative plural is quite frequent with referents forming pairs, however, e.g. *käsi* ‘hand’ : *käde-t* ‘the hands’, *jalka* ‘foot’ : *jala-t* ‘the feet’, *lasi* ‘glass’ : *silmä.lasi-t* ‘the spectacles’ (literally: ‘eye.glasses’). While the nominative plural expresses definiteness, the plural partitive, which is accordingly also used very frequently, expresses open quantification, i.e. an indefinite amount.

5.2. The first plural case forms

The first case forms to emerge in the plural are the same as those found in the singular, namely nominative and partitive. As in the adult language, the nominative plural typically refers to pairs of things while the partitive plural expresses open quantification. Only a few children use the nominative before the partitive plural (Toivainen 1980: 153).

In colloquial Finnish, the short variant of partitive plural actually has no case marking and is thus identical to the plural stem in many inflectional classes (e.g. *sana* ‘word’, standard plural partitive *sano-j-a* ‘word-PL-PARTIT = some words’, coll. plural partitive *sano-i* ‘word-PL’). This may facilitate the children’s early use of the colloquial variant of the plural partitive. Once this form of the partitive has been mastered, the formation of the other oblique cases in the plural is easier on this basis: case suffixes are added to this caseless form carrying the plural allomorph typical of oblique cases.

The first occurrences of local case forms in the plural are usually fossilized just as their singular counterparts (cf. 3.2.4). Thus, Tuulikki’s first plural illative at 1;6 is *tö-i-hin* (a lexicalized plural form, work-PL-ILL ‘to work’) used when her parents leave home for work, and her first adverb-like plural paradigm of inner local cases is *töihin* ‘away’ : *töissä* ‘absent’ : *töistä* ‘back home’. Actually, *tö-i-ssä* (work-PL-INESS) means ‘at work’ and *tö-i-stä* (work-PL-ELAT) ‘from work’, but the child’s perspective is different: when the parents are at work, they are away. The meanings ‘away’ and ‘absent’ are attested in different situations, but this 3-member paradigm is adverb-like (cf. *pois* ‘away’ and *poissa* ‘absent’), not actually a proper plural paradigm yet.

According to Tuulikki’s diary data, the first plural (partitive and nominative) forms actually denoting plural referents (and having a singular counterpart in

the corpus) are used at the age of 1;7: the first occurrence of the plural partitive is the colloquial form *kyn-i-i* (< *kyn-i-ä* ‘pen-PL-PARTIT’) noted at 1;7:27, which contrasts with the singular *kynä* (1;7:10), and the first plural nominative is *tossut* ‘bootees, slippers’. At the age of 1;8, the plural partitive is used in rote-learned colloquial forms such as *kymm-i-i* (< *kylm-i-ä*, ‘cold-PL-PARTIT’, coll. *kylm-i-i*, cf. NOM SG *kylmä* ‘cold’) and also in shortened forms which could be regarded as a kind of proto-plurals, e.g. the truncated form *rusoi* (< *rusino-i-ta* ‘raisin-PL-PARTIT’, cf. NOM SG *rusina* ‘raisin’). It must be remembered that, at this age, Tuulikki is in a rather strong trochaic stage and mainly uses bisyllabic word forms which are often truncated (cf. section 3.2.3). While some truncations, colloquial or analogical forms persist from 1;9 to 1;10, also many standard forms occur in the girl’s speech.

As pointed out in section 5.1 above, in the formation of oblique plural case forms quite complex morphophonological processes apply to the stem and these make acquisition of such case forms rather difficult resulting in a number of analogical plural forms. After the trochaic stage, ending at 1;11, Tuulikki uses the following types of plural partitives:

- a) standard forms: *siemen-i-ä* ‘seed-PL-PARTIT’, *lääkke-i-tä* ‘medicine-PL-PARTIT’, *possu-j-a* ‘piggie-PL-PARTIT’, *kakku-j-a* ‘cake-PL-PARTIT’;
- b) coll. forms (*-jA* > *-i*): *vaippo-i* ‘napkin-PL:PARTIT’ (Standard Finnish *vaippo-j-a*), *muru-i* ‘crumb-PL:PARTIT’ (Standard Finnish *muru-j-a*);
- c) an analogical type ending in *-ia* instead of *-oja*: **rah-i-a* ‘coin-PL-PARTIT’ (cf. Standard Finnish *raho-j-a*), **nauh-i-a* ‘ribbon-PL-PARTIT’ (cf. Standard Finnish *nauho-j-a*);
- d) idiosyncratic analogical formations: **pilvei* (Standard Finnish *pilv-i-ä* ‘cloud-PL-PARTIT’), **märkei* (Standard Finnish *märk-i-ä* ‘wet-PL-PARTIT’), **käse-j-ä* (Standard Finnish *käs-i-ä* ‘hand-PL-PARTIT’).

The analogical formations of type (c) are constructed on the basis of the more common pattern of plural partitives of A-stems, e.g. *silmä* ‘eye’: *silm-i-ä* ‘eye-PL-PARTIT’, *muna* ‘egg’: *mun-i-a* ‘egg-PL-PARTIT’. The idiosyncratic analogical formations (d) are based on different stem types, for example on the productive noun type of *i*-stems; the colloquial plural partitive of *i*-stems ends in *-ei*, and their standard plural partitive in *-ejA*.

The first plural-like forms occurring in Tuomas’s speech at 1;7 are the rote-learned nominatives *potta(a)* (= portaat ‘stairs’), *tattaa* (= rattaat ‘push-chair’), and *(t)aappa(a)* (= saappaat ‘boots’). Semantically, their plurality is uncertain, however; at least *rattaat* ‘push-chair’ clearly refers to a single entity. One month later, the boy uses several nominatives carrying the plural suffix *-t* with a clear

plural meaning, e.g. *autot* ‘the cars’, *ovet* ‘the doors’, [s]*ukat* ‘the socks’, *tossut* ‘the slippers’. In the same month, the short colloquial plural partitives emerge: *kyn-i-i* (< *kyn-i-ä*) ‘pen-PL-PARTIT’, *kenk-i-i* (< *kenk-i-ä*) ‘shoe-PL-PARTIT’.

As far as the local cases are concerned, they emerge in the plural as soon as they have reached productivity in the singular with both children. In Tuulikki’s diary data, there are several dozens of singular inessives, elatives, adessives and allatives at the age of 1;10 while the first corresponding plural forms occur at the age of 1;11. Illative plurals emerge earlier and ablative plurals much later than plural forms of the other local cases: illatives are first found in disyllabic types (e.g. *käs-i-in* ‘hand-PL-ILL’) at the age of 1;10 and in trisyllabic ones one month later (e.g. *kärry-i-hin* ‘carriage-PL-ILL’) but ablative plurals only occur at the age of 2;3 (e.g. *mu-i-lta* ‘other-PL-ABL’, ‘from the others’). As for Tuomas’s development of plural forms of local cases: the first diary note is 1;9 *ratta-i-sta pois* ‘push-chair-PL-ELAT away’ (= away from the push-chair), the first clear plurals are from the age of 1;10: *silm-i-stä vet-tä pois* ‘eye-PL-ELAT water-PARTIT away’ (= water, i.e. tears, away from the eyes), 1;10 *silm-i-in paista-a valo-t* ‘eye-PL-ILL shine-3S light-PL’ (= the lights are shining into the eyes), 1;10 *silm-i-ssä vet-tä* ‘eye-PL-INESS water-PARTIT’ (= there is water, i.e. tears, in the eyes).

To conclude, nominatives and partitives are the first plural forms to emerge. While plural nominatives are formed by simply adding the suffix *-t* to the singular stem, plural partitives have special stem-formation rules and serve as a basis on which other oblique plural forms can be built. The next section will be devoted to a quantitative analysis of the plural forms occurring in the tape-recorded data of both children.

5.3. Plural case forms in the recordings

In the recorded material, the first plural forms occur at 1;7 in Tuulikki’s data and at 1;8 in those of Tuomas. The types and tokens of plural case forms found in the children’s tape-recorded data during the observational period are presented in tables (4a) and (4b). Although pronouns have not been included in the countings it should be mentioned that plural forms of pronouns are used especially for expressing possession (e.g. Tuulikki 2;2 *me-i-llä* ‘we-PL-ADESS’, 2;4 *nä-i-llä* ‘these-PL-ADESS’, 2;5 *ni-i-llä* ‘those-PL-ADESS’, 2;8 *me-i-ltä* ‘we-PL-ABL’, 2;9 *ni-i-lle* ‘those-PL-ALL’).

The predominance of nominatives and partitives found in the singular also holds in the plural. Local cases are relatively well represented, especially the external local cases in their different functions such as beneficiary, e.g. Tuulikki 2;1 *kalo-i-lle* (fish-PL-ALL) ‘to the fishes’, or instrumental, e.g. Tuulikki 2;6

Table 4a. Tuulikki's plural case forms (types/tokens)

Age	NOM	PARTIT	GEN	ILL	ALL	ADESS	Other cases
1;7	–	2/2	–	1/1	–	–	–
1;8	1/1	–	–	–	–	–	INSTRUC 1/2
1;9	2/2	2/2	–	–	–	–	–
1;10	1/1	–	–	–	–	–	–
1;11	1/1	2/2	–	–	–	–	–
2;1	6/7	6/11	1/1	–	1/1	1/1	–
2;2	6/9	1/1	–	–	–	–	–
2;3	10/13	10/12	–	–	1/1	1/1	–
2;4	6/6	4/5	–	1/1	–	2/3	ELAT 1/1
2;5	10/12	9/12	–	–	–	–	INESS 2/2
2;6	9/14	5/6	1/1	–	–	1/1	–
(2;7)	–	2/2	–	–	1/1	–	–
2;8	7/8	6/8	–	–	–	–	–
2;9	9/11	1/1	2/4	–	1/1	1/1	–
2;10	7/9	3/3	4/7	1/1	1/2	1/1	ELAT 1/1

Table 4b. Tuomas's plural case forms (types/tokens)

Age	NOM	PARTIT	ILL	INESS	ALL	ADESS
1;7	–	–	–	–	–	–
1;8	1/1	–	–	–	–	–
1;9	7/11	2/2	–	–	–	–
1;10	–	1/1	–	–	–	–
1;11	–	6/11	–	–	–	–
2;0	5/22	3/3	1/2	–	–	–
2;1	1/1	–	–	1/4	–	–
2;2	11/15	14/24	1/1	–	1/1	2/2

moottori.pyör-i-llä (motor.cycle-PL-ADESS) 'with the motor-cycles'. The internal local cases are not as frequent as the external ones, nor are they in plural as frequent as in singular – especially there is a notable difference between illative singular and illative plural. The grammatical cases occurring in the plural are mostly nominatives and partitives, because genitive forms are not as common in the plural as in the singular (there are no plural genitives to be found in the recordings of Tuomas), and the plural accusatives are homophonous with the nominative.

The distribution of the case forms in plural differs from the distribution in singular in the following respects: there are gaps in certain months even in the most frequent grammatical cases; internal local cases are represented only

Table 5a. Plural case forms in Tuulikki's father's child-directed speech (types/tokens)

Age	NOM	PARTIT	GEN	ALL	ADESS	Other cases
2;2	6/12	6/6	1/1	–	–	ELAT 1/1
2;3	9/10	5/13	1/1	–	2/3	–
2;4	18/31	14/19	1/1	–	1/1	INESS 1/1, TRANSL 1/1
2;5	6/9	1/1	–	–	–	TRANSL 1/1
2;6	5/7	10/11	1/1	–	1/1	ILL 1/1, ELAT 3/4
2;8	4/4	1/2	–	1/1	–	–
2;9	7/8	1/1	–	2/2	–	–
2;10	20/24	6/7	4/4	2/2	2/2	ELAT 1/1

Table 5b. Plural case forms in Tuomas's father's child-directed speech (types/tokens)

Age	NOM	PARTIT	GEN	ILL	INESS	ELAT	ALL
1;7	7/15	3/6	–	–	–	1/1	–
1;8	11/21	16/27	4/8	2/2	–	–	3/6
1;9	7/14	3/6	–	–	–	–	–
1;10	1/2	–	1/2	–	–	–	1/1
1;11	3/3	11/19	–	2/2	–	1/1	–
2;1	4/4	1/1	–	2/2	2/2	–	–
2;2	12/23	14/17	1/1	–	–	–	2/2

occasionally; external local cases are used quite regularly, but even they have mostly only one token in a certain recording, and ablative plurals are totally absent; there is only a single marginal case occurring in the plural, Tuulikki's instructive *sormin* as early as at the age of 1;8. This form is lexicalized even in the adult language. In general, singular forms are used far more frequently than plural forms. The situation is much the same in parental speech: plural forms are not frequent (tables 5a and 5b).

6. Case and number contrasts and miniparadigms of nouns

When different grammatical forms of a number of lemmas enter the child's lexicon, these forms will begin to systematize: On the one hand, different grammatical forms of one and the same lemma enter into schematic relations forming inflectional (mini)paradigms and on the other, similar endings of different noun stems will relate, a process which may ultimately result in the segmentation and classification of suffixes. The use of different grammatical forms of a given lemma will lead to the construction of miniparadigms. A miniparadigm can

Table 6. Development of oppositions and miniparadigms in Tuulikki's tape-recorded data

Age	Case oppositions	Miniparadigms	Miniparadigms cumulatively
1;7	1	–	–
1;8	9	2	2
1;9	8	2	4
1;10	3	–	4
1;11	2	–	4
2;1	6	3	7
2;2	7	1	8
2;3	8	1	9
2;4	5	1	10
2;5	11	2	12
2;6	6	2	14

be defined as a set of minimally three accurate and distinct inflectional forms of the same lemma which are produced spontaneously in contrasting contexts (Kilani-Schoch 2003: 279). This section will be mainly based on the recorded data of the children, starting with Tuulikki's.

Already in the first recordings of Tuulikki's speech at age 1;7, there are some signs of emerging oppositions of grammatical forms of given nouns (table 1): the lemma *kirja* 'book' is used both in the partitive and nominative.

The oppositions with two contrasting case forms and the miniparadigms (with at least three members) occurring in the transcripts of Tuulikki at 1;8 and 1;9 are presented in tables 7 and 8. If the nominative form does not occur in the recording, it is placed in brackets; the nominative is followed by a plus sign (+) if at least three different case forms of the lexeme are used in the same recording. The genitive-like accusatives are included in the genitive column.

As can be seen in table 7, at 1;8 only two out of eleven nouns occurring in more than one case form are used with three cases, while the other nine lemmas occur in one marked case form besides the unmarked nominative singular. The frequency of use of given lexemes depends to a large extent on the topic of conversation. In Tuulikki's recordings at 1;7 and 1;8, the nouns *kirja* 'book' and *kuppi* 'cup' are very much used because Tuulikki likes to show her picture books and talk about them and also to play with her toy teaset and serve coffee and tea to her parents and toy animals. Accordingly, each of these nouns occurs in three of the most frequent cases, *kirja* in the nominative, partitive and accusative, and *kuppi* in the nominative, accusative and illative.

Although there are only two more true miniparadigms found in the tape-recorded data at 1;9, table 8 demonstrates that simple contrasts of two grammatical forms of a given noun include two further categories, the inessive singular

Table 7. Oppositions and miniparadigms, Tuulikki 1;8

Noun	NOM	PARTIT	GEN	ILL
appe(lsiini) ‘orange’	1	1		
kansi ‘cover’	1		1	
kirja+ ‘book’	1	5	1	
kuppi+ ‘cup’	9		5	6
linna ‘castle’	2			1
mansikka ‘strawberry’	1	1		
nalle ‘teddy’	7	1		
puuro ‘porridge’	1	6		
pöytä ‘table’	1			1
suu ‘mouth’	1			1
tutti ‘dummy’	1		1	

Table 8. Oppositions and miniparadigms, Tuulikki 1;9

Noun/Adj	NOM	PARTIT	GEN	ILL	INESS	PL
ammu+ ‘moo-cow’	6	1	2			
avain ‘key’	2	1				
(hylly) ‘shelf’			1	1		
isi ‘daddy’	5		2			
kana ‘hen’	4	1				
kello ‘clock’	4	1				
(käsi) ‘hand’				6	1	
pieni ‘little’	1					PARTIT 1
tipu+ ‘birdie’	6	1				PARTIT 1
valo ‘light’	3		1			

and the partitive plural. As is to be expected, the topic of conversation again influences the frequency and consequently the diversity of forms with which lemmas are used. Thus, the frequent and many-sided use of *ammu* ‘moo-cow’ and *tipu* ‘birdie’ is due to Tuulikki’s visit to a farm, where she had seen real cows, which made a strong impression on her, and to Easter time, when she had the occupation of playing with toy birds being part of the Easter decoration at home.

Even though the number of contrasts between forms of nouns grows slowly and case-number contrasts become more diverse between 1;9 and 2;1, there are no miniparadigms to be found in the recorded data between 1;9 and 1;11. Contrasts occurring at 1;10 in Tuulikki’s data are *juusto* ‘cheese’ (nominative and

Table 9. Oppositions and miniparadigms, Tuulikki 2;1

Noun/Adj	NOM	PARTIT	ILL	ADESS	Other cases	PL
(aasi) 'donkey'				1	ALL 1	
auto+ 'car'	4				INESS 1	PARTIT 1
karhu+ 'bear'	11				TRANSL 1	NOM 1
(Kontula)			3		INESS 7	
lelu+ 'toy'	1	1				PARTIT 6, NOM 2
mökki 'cottage'	1			1		
peikko 'troll'	1				ELAT 1	
äiti 'mother'	3	1				

partitive), *pöytä* 'table' and *äiti* 'mother' (nominative and genitive) and at 1;11, *bussi* 'bus' (adessive and ablative) and *isi* 'daddy' (nominative and genitive).

It is only from 2;1 onward that the number of miniparadigms grows considerably (see table 6 above). As compared to 1;9 (table 8), the number of miniparadigms comprising plural forms has grown at 2;1 (table 9). At this point, also new case forms such as the inessive *auto-ssa* 'in the car', the translative *karhu-ksi* 'to a bear' and the plural nominatives *karhu-t* 'bears' and *lelu-t* 'toys' appear as members of miniparadigms.

Summarizing the development of miniparadigms in Tuulikki's tape-recorded data, most of her early miniparadigms include nominative, partitive and genitive singular forms. Besides, local cases appear as members of miniparadigms in every month from 1;8 on. The translative is found in a miniparadigm only once at 2;1 (*karhu-ksi* '(to become) a bear'). A plural form first appears in a miniparadigm at the age of 1;9 (*tipu* 'birdie' : *tipu-a* 'birdie-SG-PARTIT' : *tipu-j-a* 'birdie-PL-PARTIT'). While plural forms in miniparadigms are mostly limited to nominatives and partitives, a plural adessive occurs at 2;3: *hepo-i-lla* 'horse-PL-ADESS' (= with the horses). The development of case contrasts and mini-paradigms is slow and steady, there is no developmental spurt.

The tokens of case oppositions and miniparadigms found in Tuomas's tape-recorded data are summarized in table 10. Although the tape-recorded data do not give evidence of any case contrasts at 1;7 since they contain almost exclusively nominative singular forms and the only oblique case form, the illative *koti-in* 'home-ILL' (= home), is not accompanied by the nominative form *koti* 'the home', the diary material shows that, in this early month, Tuomas also uses several partitives (e.g. *juusto-a* [tuuttoo] 'cheese-PARTIT', *kuuma-a* 'hot-PARTIT', *leipä-ä* [peepää] 'bread-PARTIT') and some illatives with a nominative counterpart (e.g. *jalka-an* [kaakaa] 'foot-ILL', *kuppi-in* 'cup-ILL').

After the first miniparadigm documented at 1;8 in the tape-recorded data, there are three more of them one month later and an almost constant increase at

Table 10. Development of oppositions and miniparadigms in Tuomas's tape-recorded data

Age	Case oppositions	Miniparadigms	Miniparadigms cumulatively
1;7	–	–	–
1;8	8	1	1
1;9	3	4	5
1;10	9	1	6
2;0	8	3	9
2;1	3	3	12
2;2	4	4	16

Table 11. Oppositions and miniparadigms, Tuomas 2;1

Noun	NOM	GEN	ALL	ADESS	ILL	INESS	ELAT
laiva 'ship'	3			3			
paita+ 'shirt'	3	1					1
saari+ 'island'	2		2	1	1	5	1
sisko 'sister'	2	1					
tuoli+ 'chair'	1			2		1	
vesi 'water'	1					1	

the age of 2;1 and 2;2 (table 10). One of the miniparadigms found at 2;1 even comprises 6 members (table 11). When pretending to travel to some island by boat, stay there for a while and then travel back, Tuomas uses the word *saari* 'island' in the nominative and in 5 local cases.

While all of the boy's case forms are in the singular until 2;1, one month later, the plural is used in the nominative and partitive with 4 different nouns and one of them, *eläin* 'animal', also occurs in two external local cases when Tuomas speaks about his toy animals.

According to the theoretical framework of usage-based theory of language acquisition, grammatical systems are constructed from grammatical forms of specific lexical items and even abstract grammatical schemas are considered to remain tied to their lexical bases. It therefore seems important to show which types of nouns the two children studied in this chapter use to express different grammatical and semantic relations in their early stages of the acquisition of Finnish.

Nouns belonging to certain semantic classes are frequently found in the tape-recordings of both Tuulikki and Tuomas. One of these are names for family members, such as *äiti* 'mother' and *isä* (and the diminutives *isi* and *iskä*) 'father'; the little brother Tuomas also uses *sisko* 'sister'. Another frequently used lexeme

Table 12. Oppositions and miniparadigms, Tuomas 2;2

Noun	NOM	GEN	Other cases	PL
eläin+ 'animal'				NOM 2, ALL 1, ADESS 1
housut 'trousers'				NOM 1, PARTIT 2
kaveri+ 'pal'	1		ADESS 1, ESS 1, TRANSL 4	PARTIT 3
sisko+ 'sister'	17	5	PARTIT 1	
tunneli 'tunnel'	2			NOM 1
Tuomas+	14	3	ADESS 1	
vauva 'baby'	1	1		
äiti 'mother'	5	1		

group are names of (toy) animals, e.g. *ammu* 'moo-cow', *heppa* 'horse', *karhu* 'bear' and *tipu* 'birdie' used by Tuulikki as well as *ankka* 'duck' and the more abstract *eläin* 'animal' used by Tuomas. Furthermore, both children use *nalle* 'teddy' in the very same case forms, namely the nominative, genitive and allative (Tuomas at 1;9 and Tuulikki at 2;2).

Other lexemes occurring in miniparadigms are typically connected with the respective playing situations during recordings (e.g. Tuulikki's *kirja* 'book', *kuppi* 'cup', *lelu* 'toy', *violetti* 'violet', *kaakao* 'cocoa', *kylmä* 'cold', *peite* 'blanket' and *ruoka* 'food' and Tuomas's *kaveri* 'pal', *kuppi* 'cup', *paita* 'shirt', *tie* 'way', *tuoli* 'chair' and *ympyrä* 'circle'). *Auto* 'car' is used in different forms by both children when playing with toy cars.

Only a small number of lexemes are used by the children in more than two or three inflectional forms. As mentioned above, there is one 6-member miniparadigm of the noun *saari* 'island' to be found in Tuomas's tape-recorded data at 2;1. Besides, a 5-member miniparadigm occurs at 2;2, namely *kaveri* 'pal' used in the nominative and adessive singular, the plural partitive and in the singular forms of the role cases essive (*kaveri-na* 'as a pal') and translative (*kaveri-ksi* 'to (become) a pal').

A remaining question is whether miniparadigms consisting of at least three members tend to develop from contrasts of two grammatical forms. Although this kind of development might be expected, it is only occasionally attested by the tape-recorded data. Thus, in Tuulikki's speech, the noun *nalle* 'teddy' occurs in two grammatical forms at 1;8 and in a miniparadigm at 2;2. There is one similar example in Tuomas's data, namely *sisko* 'sister' occurring in an opposition at 2;1 and in a miniparadigm one month later.

7. Conclusion

Summarizing the main findings of this paper on the acquisition of Finnish nominal inflection, in the premorphological period, Finnish-speaking children use nouns in just one form each. In a usage-based approach to language acquisition, it is important to keep in mind that these are case forms used in different contexts. For most nouns, the first form occurring in child speech is the inflectionally unmarked nominative singular, but some nouns referring to uncountables are first used in the partitive and certain other nouns in the illative. Whether the forms used by the child in this early period carry a suffix or not, all of them are rote-learned as unanalyzable chunks. Nevertheless, the child is getting at least tentatively familiarized with some of the suffix elements of the language and with the use of these inflected forms.

The genitive and accusative forms are the first clearly inflectional forms contrasting systematically with the forms used earlier by the children. These two cases have identical suffixes (-*n*) in the singular in most instances (cf. 2.2), but their functions differ: the genitive expresses possession, the accusative marks the object. When the child starts to use genitive and accusative forms the first case oppositions emerge and the active processing of morphological elements of nouns begins (for verbs, see Laalo 2003). There are two reasons why the genitive and accusative forms are used relatively early; one is their pragmatic importance and consequently their high frequency in the input and the other is their formal simplicity, since the suffix -*n* is a short and superstable marker.

In Finnish child language, local case endings first occur with adverbs and only gradually develop into the many-sided uses of local cases in their different functions. The ablative is restricted to local functions, it occurs less frequently in the input and is therefore acquired as the last member of the external local cases.

The use of plural case forms begins with the partitive and nominative. The local cases are used in the plural soon after they have been established in singular.

Clear evidence that morphological processing is under way and that development has proceeded from the premorphological well into the protomorphological period is the child's creative use of morphological means and the production of analogical forms (see sections 4 and 5.2).

The construction of true miniparadigms, i.e. paradigms consisting of at least three members, is another important sign of inflectional development. The most important members of early oppositions and miniparadigms are first of all the grammatical cases (nominative, partitive, genitive and accusative) and also the three local cases illative, adessive and allative (see section 6). Of these three local cases, the illative emerges very early. Both the adessive and the allative

have other important functions besides purely local ones. The other local cases, the inessive, elative and ablative, occur rather infrequently and are consequently only occasionally found in miniparadigms. As far as plural case forms are concerned, their occurrence in miniparadigms is mostly limited to nominatives and partitives, but there are also a few adessives and allatives to be found. To what degree miniparadigms occur in the respective recordings seems to largely depend on the topic of conversation: lexemes related to the topic tend to occur more frequently and in a number of different forms. Nevertheless, the child's familiarity with different inflectional forms of frequently occurring lexemes can also be assumed to play an important role, since the child will feel more secure with such forms and use them in her own speech production more freely. Lexemes such as these include names of family members, toys and (toy) animals.

Notes

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