

# Early verb development in Finnish: A preliminary approach to miniparadigms\*

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## 0. Introduction

This paper presents a preliminary investigation of the early acquisition of verb inflection in Finnish. The analysis of the first miniparadigms concentrates on one girl (called Tuulikki).

## 1. Verb inflection in spoken Finnish

The Finnish verb categories which emerge early in the speech of children are (cf. Toivainen 1980):

- a) person (+ voice)
  - active (unmarked): 3 persons in singular and in plural (total 6)
  - “passive” = the indefinite 4<sup>th</sup> person without person distinctions (the forms of this so-called personal passive are also used in spoken Finnish – and in child language – in the function of the 1<sup>st</sup> person plural)
- b) tense
  - present (unmarked)
  - preterite (past): *i*-suffix in Standard Finnish, e.g. present *nukkuu* ‘is sleeping’ vs. past *nukkui* ‘slept’, present *antaa* ‘gives’ vs. past *antoi* ‘gave’; in colloquial speech also stem alternation without suffix = shortening or change of the final stem vowel, e.g. present *antaa* vs. past *anto*, present *nukkuu* vs. past *nukku*; in spoken Finnish the 3<sup>rd</sup> person singular of contracted verbs *-si* > *-s* (e.g. *haukkasi* > *haukkas*), and the *s* originally belonging to the stem is now a tense marker
- c) mood
  - indicative (unmarked)
  - imperative
  - conditional (*isi*-suffix)

## d) infinitives

- 1<sup>st</sup> infinitive (TA-suffix)
- 3<sup>rd</sup> infinitive (mA-suffix + case endings: illative -Vn, inessive -ssA etc.)
- 2<sup>nd</sup> infinitive (not in the investigated data)

## e) participles

- active and passive past participles (obligatory in analytic constructions, e.g. in past tense negation)

There are two important analytic constructions:

- **NEGATION CONSTRUCTION:** Finnish has a negation verb (stem *e-*, in imperative stem *äl-*). This verb is inflected and the main verb is in the negation form (which is identical with the 2S imperative, e.g. *minä en nuku* ‘I don’t sleep’, *sinä et nuku* ‘you don’t sleep’, *hän ei nuku* ‘he doesn’t sleep’, *me emme nuku* ‘we don’t sleep’ etc.).
- **COMPOUND PAST** (“perfect tense”) = AUX *olla* ‘to be’ + the past participle of the main verb.

In the acquisition of Finnish, the long analytic constructions are at first shortened to their key parts: the negation construction is realized by the negation verb alone (at the beginning in the 3S form *ei*) and the compound past is realized by the participle of the main verb.

All these verb categories are productive. The morphologically most simple forms, 3S indicative and 2S imperative, can be regarded as the basic forms of the verb (cf. Toivainen 1980: 44).

There are four verb classes which Finnish-speaking children use relatively early:

- A. Verbs with a vowel stem that ends in a short vowel (e.g. *istua* ‘to sit’ : *istu!* ‘sit!’, *sanoa* ‘to say’ : *sano!* ‘say!’; the A is the suffix of the infinitive, the “!” signals the 2S imperative); this is the most common type of Finnish verbs and still fairly productive.

## Present

| indicative | SG            | PL                                      |
|------------|---------------|---|
| 1. person  | <i>istu-n</i> | <i>istu-mme ~ istutaan</i> <sup>1</sup> |
| 2. person  | <i>istu-t</i> | <i>istu-tte</i>                         |
| 3. person  | <i>istu-u</i> | <i>istu-vat</i>                         |

Past tense (preterite) stem: *istui-* (*istuin, istuit, istui* etc. but in colloquial speech the 3S is *istuu*);

1<sup>st</sup> infinitive: *istua*;

Passive: *istutaan* (present) : *istuttiin* (past).

- B. Monosyllabic verbs with a vowel stem that ends in two vowels (e.g. *syödä* 'to eat' : *syö!* 'eat!', *juoda* 'to drink' : *juo!* 'drink!', *viedä* 'to take away' : *vie!* 'take away!'); the past tense in this class is exceptional because of the vowel change (not simply suffixation), cf. *syön* 'I eat' : *söin* 'I ate', *juon* 'I drink' : *join* 'I drank'; this class is unproductive

Present

indicative SG PL

1. person *vie-n* *vie-mme ~ viedään*<sup>2</sup>

2. person *vie-t* *vie-tte*

3. person *vie* *vie-vät*

Past tense (preterite) stem: *vei-* (*vein, veit, vei* etc.);

1<sup>st</sup> infinitive: *viedä*;

Passive: *viedään* (present) : *vietiin* (past).

- C. Contracted verbs; these verbs have both a vowel stem, which ends in at least two vowels, and a consonant stem (e.g. *hyppää* 'jumps' : *hyppää!* 'jump!' (2S imperative) : *hypät+kää* 'jump!' (2P imperative)'); this verb class is very productive

Present

indicative SG PL

1. person *hyppää-n* *hyppää-mme ~ hypätään* ("pseudopassive")

2. person *hyppää-t* *hyppää-tte*

3. person *hyppää* *hyppää-vät*

Past tense (preterite) stem: *hyppäsi-* (*hyppäsin, hyppäsit, hyppäsi* etc.);

1<sup>st</sup> infinitive: *hypätä*;

Passive: *hypätään* (present) : *hypättiin* (past).

- D. Other verbs with both a vowel and a consonant stem: the vowel stem ends in a short *e* preceded by a dental consonant, the consonant stem ends in this dental consonant and the stem-final *e* is dropped, e.g. *tule-e* 'comes' : *tule!* 'come!' (2S imperative) : *tul+kaa* 'come!' (2P impera-

tive)' : *tul+lut* 'has come', *mene-e* 'goes' : *mene!* 'go!' : *men+kää* 'go! (2P imperative)' : *men+nyt* 'has gone'; this class is only marginally productive (there are some new derivatives belonging to this class).

Present

indicative SG PL

1. person *tule-n* *tule-mme* ~ *tullaan*<sup>3</sup>

2. person *tule-t* *tule-tte*

3. person *tule-e* *tule-vat*

Past tense (preterite) stem: *tuli-* (*tulin*, *tulit*, *tuli* etc.);

1<sup>st</sup> infinitive: *tulla* (consonant stem);

Passive (consonant stem): *tullaan* (present) : *tultiin* (past).

## 2. Data description

This study is mainly based on the speech of Tuulikki (girl, born in June 1991). Some observations from Tuomas (boy, born in May 1997) are also presented. There is diary data from both children from the onset of speech and monthly recordings. The earliest recordings of Tuulikki (1;7 – 1;11), which have been systematically transcribed and morphologically coded, cover the period of the first miniparadigms. The following recordings from Tuulikki's speech have been used in the analysis:

Table 1. Recordings from the speech of Tuulikki

| Age  | appr. duration | analysed child utterances |
|------|----------------|---------------------------|
| 1;7  | 90 minutes     | 212                       |
| 1;8  | 90 minutes     | 304                       |
| 1;9  | 30 minutes     | 219                       |
| 1;10 | 30 minutes     | 76                        |
| 1;11 | 60 minutes     | 309                       |
| 2;1  | 60 minutes     | 136                       |

Some truncated forms occur, notably in the first recordings, and it is not possible to identify the morphological category of these shortened verb forms with certainty (e.g. *katte*, cf. the verb stem *kastele-* 'to water, to moisten'). Sometimes it is not even evident whether the form is a verb or not (e.g. *mita*, *mitta*, cf. the verb *mitata* : *mittaa* 'to measure : measures')

and the noun *mitta* 'the measure'). These unclear forms have been excluded from the analysis. The analysed verb forms of Tuulikki are presented in Table 2 below.

Table 2. Emergence of verb forms and categories (F: = formulaic expressions; I: = imitated forms)

| MORPHOLOGIC CATEGORIES          | DIARY                   |       | RECORDINGS           |       |         |       |       |       |        |       |
|---------------------------------|-------------------------|-------|----------------------|-------|---------|-------|-------|-------|--------|-------|
|                                 | (number of verb lemmas) |       | (verb lemmas/tokens) |       |         |       |       |       |        |       |
|                                 | 1;3                     | 1;4   | 1;5                  | 1;6   | 1;7     | 1;8   | 1;9   | 1;10  | 1;11   | 2;1   |
| 2S imperative                   | 2                       | 1     | 3                    | 2     | 3/5     | 8/12  | 1/1   | 3/5   | 2/2    | 2/2   |
| 3S indicat. pres.               | –                       | 2     | 11                   | 20    | 30/54   | 38/99 | 22/51 | 18/54 | 29/117 | 19/65 |
| 3S ind. past                    | –                       | –     | (F:1)                | (F:2) | 5/6     | 6/9   | 10/20 | 2/4   | 13/39  | 6/7   |
| 1S ind. present                 | –                       | –     | –                    | 1     | –       | –     | 1/1   | –     | 7/12   | 6/8   |
| 1S ind. past                    | –                       | –     | –                    | –     | –       | –     | –     | –     | 1/1    | 2/2   |
| 2S ind. present                 | –                       | –     | –                    | –     | –       | –     | –     | 1/1   | –      | 1/1   |
| passive present                 | –                       | (F:1) | –                    | –     | (I:2/3) | 2/5   | 2/3   | 4/5   | 12/18  | 8/14  |
| passive past                    | –                       | –     | –                    | –     | –       | –     | 2/2   | –     | 4/6    | 2/2   |
| 3 <sup>rd</sup> infin. illative | –                       | –     | –                    | (F:1) | –       | 1/2   | 1/1   | 1/4   | 4/5    | 1/2   |
| 1 <sup>st</sup> infinitive      | –                       | –     | –                    | –     | –       | 1/1   | –     | –     | 7/9    | 5/8   |
| PASTPT passive                  | –                       | –     | –                    | –     | –       | –     | –     | –     | 1/1    | 1/1   |
| PASTPT active                   | –                       | –     | –                    | –     | –       | –     | –     | –     | 4/7    | 2/2   |
| 3S conditional                  | –                       | –     | –                    | –     | –       | –     | –     | –     | –      | 1/1   |
| 3 <sup>rd</sup> infin. inessive | –                       | –     | –                    | –     | –       | –     | –     | –     | 1/1    | –     |
| negat. active (3S)              | –                       | –     | –                    | –     | 1/1     | 1/12  | 2/21  | 1/2   | 6/12   | 2/2   |
| negation passive                | –                       | –     | –                    | –     | –       | –     | –     | –     | 1/1    | 1/1   |
| 2P ind. present                 | –                       | –     | –                    | –     | –       | –     | –     | –     | –      | 1/1   |

### 3. Precursors of verbs

Among the very first word-forms used by Tuulikki and Tuomas there were some which expressed actions, events and processes before adult-like verbs:

- a) The adverb *pois* 'away' (also in truncated form: *po*, *poo* etc.) was used by both Tuulikki (from the age of 1;4 onwards) and Tuomas (from the age of 1;3 onwards) much in the same way as the English verb particle *away* (cf. partially the German prefix *weg*). Presumably, *pois* (or the

truncated variant of it) is favoured by small children because it is short and has only one form, whereas the verb is more demanding: it is inflected in different forms and it is longer (e.g. *mene* ~ *mennä(än)* *pois* 'go ~ let's go away').

- b) Certain case forms of nouns in expressions consisting of a single word-form:
- b1) objects, especially mass nouns in partitive instead of their governing verbs: *vettä* ~ *tettä* 'water' in the meaning 'give me some water (to drink)', *pullaa*, *puuroa* ~ *puuvoo* etc. in the meaning 'give me some buns, porridge (to eat)';
- b2) adverbs: The dynamic local cases, especially the illative, seem to be an alternative to certain verb forms in early child speech, c.f. *kotiin* '(let's go) home' and *syliin* '(I want to come) into someone's lap' (morphologically *kotiin* = *koti* 'home' + the illative suffix *-in*, and *syliin* = *syli* + the illative suffix *-in*). These illative forms are used much like the early illative forms of the 3<sup>rd</sup> infinitive, e.g. *syömään* 'come ~ let's go and eat' (consisting of the verb stem *syö-*, 3<sup>rd</sup> infinitive suffix *-mA-* and illative suffix *-än*) or such early pseudopassives as *mennään* 'let's go' or. These two verb forms and the illative forms of nouns also have the same type of final suffixes: vowel lengthening + *n*.
- c) Early reduplicative expressions, also attested from other Finnish children (e.g. Kauppinen 1981: 18): *anna-anna-anna-anna* ~ *mam-mam-mam-mam* ~ *nam-nam-nam-nam* 'give (something to eat/drink, used often in combination with a pointing gesture)'. Some more idiosyncratic ones: Tuulikki's *ihhaa ihhaa* (< shortened from the nursery rhyme "ihhahhaa, ihhahhaa, hepo hirmahtaa", used when riding with a toy horse or – by the child – even when seeing a picture of a horse). The form *anna* is the 2S imperative of the verb *antaa* 'to give', the other reduplicative expressions are built on onomatopoeia; both *nam* 'yum yum' and *ihahaa* (imitating the whinny of the horse) can occur also alone in Standard Finnish, but *mam* is not an established interjection in (adult) Finnish.
- d) Onomatopoeia, both reduplicative (cf. point c above) and others, e.g. *miau* imitating the purring of the cat, *surrur* and *prrr* imitating the sounds of different machines. These onomatopoeia are iconic in the sense that they refer directly to their referents; they are also indexical in the sense that they refer specifically to the sound produced by their referents. At the age of 1;5 Tuulikki often used the sound-imitating reduplicative formation *kipi kipi* when she was herself pattering (cf. the Fin-

nish verb *kipittää* 'to patter, to scamper'); she also said *kopu kopu kopu* when she heard a neighbour using a hammer (cf. the verb *koputtaa* 'to tap'). The formation *kipi kipi* is also used in adult Finnish as an onomatopoeic reduplicative particle, and the other may be based on it (but cf. also the adult reduplicative interjection *kop kop* 'tap tap').

#### 4. Emergence of verbs and verb categories

##### 4.1. Two basic verb forms

The 2S imperative and the 3S indicative forms are the first verb forms used by Finnish-speaking children (Toivainen 1980: 33, 44). They can be regarded as basic forms of the verbs because they are morphologically basic (short and simple) and are used as building bricks for more complicated forms to be acquired later. They are also basic from the categorical view: the 3S indicative is semantically the most neutral verb form and it has high frequency; the 2S imperative can be regarded as a basic verb form for the child in the instrumental use of language. These two forms are used pragmatically in an accurate way from the very beginning: the imperatives in requests and the indicatives in declarative sentences when speaking about ongoing action.

In spoken Finnish, the initial consonant of the word following an 2S imperative form can appear as an additional marker of the imperative, e.g. *annas se minulle* 'give it to me' (cf. Toivainen 1997: 109), but small children usually omit this final segment, and the vowel stem alone is then used to represent the imperative, e.g. *anna* 'give', *sano* 'say', *tule* 'come'. The opposition between this 2S imperative and the 3S indicative is then based on vowel quantity: the 3S indicative is in the present tense formed by lengthening the short stem-final vowel, e.g. *istuu* 'is sitting', *sanoo* 'says', *tulee* 'comes'. The long final vowel remains unchanged, as in the monosyllabic verbs (e.g. *vie* 'takes', *syö* 'is eating') and in contracted verbs (e.g. *hyppää* 'jumps'). In monosyllabic verbs and in contracted verbs there is thus no formal opposition between 2S imperative and 3S indicative until the child begins to use the final segment in the imperative, but then there is an opposition, e.g. *avaa laatikot* 'opens the boxes' vs. *avaal laatikot!* 'open the boxes!'). Nevertheless, imperatives and indicatives can in most cases be identified on pragmatic grounds.

In contrast to many other languages, the infinitives are used relatively late in Finnish child language. The reasons for this may be that the Finnish

infinitives are morphologically complex and that there are several infinitives, two of which have several case forms.

#### 4.2. Other verb forms

The third verb form to be used by many Finnish-speaking children is the 3S preterite (past tense) (Toivainen 1980: 66–69, 162). The very first (formulaic) preterite forms may be such as *tippu* ‘fell’ (used when for example food or toys have fallen on the floor) or *loppu* ‘end(ed)’ (used typically when the food has all been eaten up). Soon, different preterite forms are used accurately when speaking about actions and events that happened before the present time. There is a clear contrast between present and past, in some instances even in successive utterances, e.g. Tuulikki 1;8 *äiti hakee* ‘Mother is fetching’ (a book) vs. *äiti haki* ‘Mother fetched’ (when the mother had brought the book).

Also, the negation construction emerges fairly early in the formulaic expression *ei ole ~ ei oo* ‘is not’. Other verbs were used only much later (Tuulikki 1;9 *ei mahdu /ei mahu/* ‘does not fit’).

The early occurrences of other verb forms are mostly isolated and rare but used in a correct way, typically in connection with daily routines: Tuulikki 1;4 the passive present form *mennään* ‘let’s go’, 1;6 the 3<sup>rd</sup> infinitive illative *syömään* ‘come to eat’ (morphologically *syö-mä-än* = eat-3<sup>rd</sup>infinitive illative) and the 1S form *kuulen* ‘I hear’ (cf. 5.1.); Tuomas 1;6 the passive present form *pestään /pettää/* ‘let’s wash’, 1;7 the 1<sup>st</sup> infinitive *pestä /pettä/* ‘to wash’ and the passive past participle *pesty /petty/* ‘has been washed’ in connection with washing routines.

#### 4.3. Diary data: Tuulikki, girl

Diary data is presented as background information and analysed as supplementary material for two reasons: because many verbs were already used by Tuulikki before the first recordings and because some verb forms which were accurately used by her during a certain month are missing from the recordings of that month, often due to the topic and speech situation.

The basic forms of the Finnish verbs, imperative singular 2<sup>nd</sup> and indicative singular 3<sup>rd</sup>, are short and simple and they are used as building bricks for other forms to be acquired later. These were also the first verb

forms used by Tuulikki. Some isolated forms from other categories were also used by her rather early (passive, the 1<sup>st</sup> and the 3<sup>rd</sup> infinitive, negation verb, participles) but the third form to be used productively was the 3S preterite (past tense). Certain forms were shortened because of the strong trochaic tendency in Tuulikki's speech, e.g. 1;5 *kävelee* 'is walking' > *käme*.

The very first verb form used by Tuulikki was 0;10 *kato* (phonetically: *ato*) 'look', which is the 2S imperative of the verb *katsoa* 'to look'. This form was one of her very first words and was based on the adult imperative *kato*, but at first it was an isolated form which Tuulikki used together with a pointing gesture and perhaps rather a predecessor of verb forms than an actual imperative. Later on, it became a member of the verb paradigm *katto-* (*katso-*) 'to look'. The subsequent early imperatives were 1;3 *avaa* 'open' and 1;4 *anna* 'give'. From these two, especially *avaa* was used by Tuulikki in a semantically flexible way: besides the adult meaning 'open' it was used in such meanings as 'skin this fruit', 'wind this toy', 'turn the page', 'construct' and 'take to pieces'. This kind of overextension is typical for early child language (cf. Barrett 1995; Clark 1993: 33–36).

Even if the semantics of these early forms was somewhat vague, considered from the pragmatic perspective these forms were imperatives used correctly, and they were clearly based on the adult imperatives. They were the child's first expressions of action.

From the age 1;4 onwards, Tuulikki started to use 3S present tense indicatives. The number of new verb lemmas used in the 3S present indicative grew rapidly: at the age of 1;4 the first two appeared but at the age of 1;5 there were 11 and at the age of 1;6 even 20 verb lemmas used in the 3S present indicative.

The number of imperatives grew steadily but rather slowly: after the first three mentioned above there were three new 2S imperatives at the age of 1;5. One of these, *ota* 'take' was the first 2S imperative form contrasting with a 3S indicative form, so in the diary data the first two-member mini-paradigm of Tuulikki was 1;5 *ota* 'take' : *ottaa* 'takes'.

At the age of 1;6 Tuulikki had about 40 verb lemmas. From most verbs she used either the 2S imperative or the 3S indicative form. The early representatives of these forms were

- |     |               |      |                   |        |
|-----|---------------|------|-------------------|--------|
| (1) | 2S.Imp forms: | 0;10 | <i>kato /ato/</i> | 'look' |
|     |               | 1;3  | <i>avaa</i>       | 'open' |
|     |               | 1;4  | <i>anna</i>       | 'give' |

|     |               |                     |                            |                |
|-----|---------------|---------------------|----------------------------|----------------|
|     | 1;5           | <i>pane /manel/</i> | 'put'                      |                |
|     | 1;5           | <i>ota</i>          | 'take'                     |                |
|     | 1;5           | <i>pese</i>         | 'wash'                     |                |
| (2) | 3S.Ind forms: | 1;4                 | <i>hyppii</i>              | 'is jumping'   |
|     |               | 1;4                 | <i>vetää</i>               | 'is pulling'   |
|     |               | 1;5                 | <i>istuu /ittuu/</i>       | 'is sitting'   |
|     |               | 1;5                 | <i>kävelee /käme/</i>      | 'is walking'   |
|     |               | 1;5                 | <i>nukkuu</i>              | 'is sleeping'  |
|     |               | 1;5                 | <i>ottaa</i>               | 'is taking'    |
|     |               | 1;5                 | <i>pakkaa</i>              | 'is packing'   |
|     |               | 1;5                 | <i>piirtää /piivtää/</i>   | 'is drawing'   |
|     |               | 1;5                 | <i>pitää</i>               | 'must' (modal) |
|     |               | 1;5                 | <i>potkii /pokkii/</i>     | 'is kicking'   |
|     |               | 1;5                 | <i>tanssii /ta(a)ssii/</i> | 'is dancing'   |

At the age of 1;4 – 1;6 Tuulikki also used some isolated forms from other verb categories:

|     |     |                      |                 |  |
|-----|-----|----------------------|-----------------|--|
| (3) | 1;4 | <i>mennään</i>       | 'let's go'      | (passive present)                            |
|     | 1;5 | <i>tippu</i>         | 'fell'          | (a frozen past indicative 3S)                |
|     | 1;6 | <i>kiitti</i>        | 'thanks'        | (a frozen past indicative 3S)                |
|     | 1;6 | <i>loppu /boppu/</i> | 'end' ~ 'ended' | (possibly a frozen past indicative 3S)       |
|     | 1;6 | <i>syömään</i>       | 'come and eat'  | (illative of the 3 <sup>rd</sup> infinitive) |

The first past tense form contrasting with the present tense form of the same verb was used by Tuulikki at the age of 1;7 when she was playing with her toy animals and said: *puskee /pukkee/* 'butts' : *puski /pukki/* 'butted'.

#### 4.4. Tuomas, boy: Preliminary comparison (diary data)

As in the case of Tuulikki, so also in the case of Tuomas the first verb forms to emerge were the two basic forms. The very first verb form used by Tuomas was the 2S imperative *anna!* 'give!'. The following two were *pelaa /pecaa/* 'play! ~ plays' and *avaa* 'open! ~ opens'. These two are forms of contracted verbs and they are ambiguous: they may represent both

2S imperatives and 3S indicatives, and they seemed to be used by Tuomas in both functions.

At the age of 1;3 Tuomas started to use verb forms that were unambiguously 3S indicatives, namely *kiikkuu* ‘is swinging’ and *nukkuu* /*kukkuu* ~ *gukkuu*/ ‘is sleeping’.

The first (formulaic) 3S past tense form was used by Tuomas at the age of 1;4, namely *tippu(i)* /*pippu*/ ‘fell’ (cf. Tuulikki 1;5). At the same age he also used the form *loppu* /*poppu*/, which can be either the 3S past tense indicative of the verb *loppua* ‘to end’ or the nominative singular of the noun *loppu* ‘the end’.

The first two-member miniparadigms of Tuomas were two oppositions of 3S indicative and 2S imperative at the age of 1;7, namely *auttaa* /*attaa*/ ‘helps’ : *auta* /*autta*/ ‘help!’ and *istuu* /*ittuu* ~ *ihtuu*/ ‘is sitting’ : *istu* /*ittu*/ ‘sit!’. The first opposition of present and past emerged also at the same age: *kaatuu* /*kattuu*/ ‘is falling’ : *kaatu(i)* /*kaatu* ~ *kattu*/ ‘fell’.

At the age of 1;8 the morphological opposition of active and passive (actually pseudopassive used in the function of 1P) emerged, e.g. *istuu* ‘is sitting’ : *istuttiin* ‘we were sitting’ (passive past) and *meni* ‘went’ : *mennään* ‘let’s go’ (passive present). At 1;8 Tuomas also had the first three-member miniparadigm, namely *kato* ‘look!’ : *kattoo* ‘is looking’ : *katottiin* ‘we were looking’ (passive used in the function of 1P); some other verbs were occasionally used in 3 – 4 forms but these forms were not really established yet. The opposition of present and past was used in many verbs (e.g. *hyppää* ‘jumps’ : *hyppäs* ~ *hyppi* ‘jumped’, *kääntyy* ‘is turning’ : *käänty* ‘turned’, *lähtee* ‘goes’ : *lähti* ‘went’). There were also some analogical past tense forms such as *autti* ‘helped’ from the verb *auttaa* ‘to help’ (cf. the standard past tense form *auttoi*) and contaminations, e.g. *ajee* ‘is driving’ = *ajaa* ‘is driving’ + *ajelee* ‘is driving’ (frequentatively; *-ele-* is a derivative element used to form frequentative verbs).

## 5. Emergence of miniparadigms

The miniparadigms are established following the criteria proposed by Kilani-Schoch and Dressler (2000): spontaneous production (neither imitative nor formulaic), articulatory accuracy in the suffix elements, contrasting contexts (not strictly context-bound), recurrence (cf. also Kilani-Schoch, this volume). Since the transcripts are relatively short and abundant diary data is available, diary data is used as supplementary material in evaluating

whether certain verb forms and inflectional categories were established in the speech of Tuulikki at a certain age.

### 5.1. The first contrasting verb-forms of Tuulikki

The first oppositions of verb forms to emerge in Tuulikki's speech were oppositions of the two basic verb forms, the 2S imperative and the 3S indicative. This opposition was manifest early in many verbs belonging to class A:

- (4) 1;5 *ota* 'take!' : *ottaa* 'takes' (diary)  
 1;7 *nosta* /*notta*/ 'lift!' : *nostaa* /*nottaa*/ 'lifts' (diary)  
 1;7 *katso* /*kato*/ 'look!' : *katsoo* /*kattoo*/ 'is looking' (record.)  
 1;8 *nouda* /*noula*/ 'fetch!' : *noutaa* 'fetches' (record.)  
 1;8 *tule* ~ *tuu* 'come!' : *tulee* 'is coming' (diary + record.)

In the contracted verbs (e.g. Tuulikki 1;3 *avaa*, 1;5 *pakkaa*, 1;6 *hörppää*, *pelaa*, *nojaa*) there is no overt morphological difference between the two basic forms before the children start to use the final segment (gemination of the following consonant ~ glottal stop) of the imperative (after that the opposition is: indicative -VV vs. imperative -VV'); the inflectional category of the occurrences can nevertheless often be inferred from the context.

The opposition of 3S indicative present and preterite was also soon in frequent use and at the age of 1;7 Tuulikki had many two-member mini-paradigms consisting of the 3S present and past tense forms:

- (5) *heittää* 'throws' : *heitti* 'threw' (record.)  
*kaatuu* 'falls' : *kaatu* 'fell' (record.)  
*laittaa* 'puts' : \**laitti* 'put' (SF *laittoi*) (record.)  
*nukkuu* 'is sleeping' : *nukku* 'slept' (record.)  
*on* 'is' : *oli* 'was' (diary)  
*peittää* 'covers' : *peitti* 'covered' (diary)  
*puskee* 'butts' : *puski* 'butted' (diary)  
*riisuu* 'strips' : *riisu* 'stripped' (record.)  
*vie* 'takes away' : *vei* 'took away' (diary)

The opposition of 3S indicative present and preterite was even more frequently used at the age of 1;8:

|     |                |                 |   |                                 |                       |                   |
|-----|----------------|-----------------|---|---------------------------------|-----------------------|-------------------|
| (6) | <i>antaa</i>   | 'gives'         | : | <i>anto</i>                     | 'gave'                | (diary)           |
|     | <i>hakee</i>   | 'fetches'       | : | <i>haki</i>                     | 'fetched'             | (diary)           |
|     | <i>keittää</i> | 'is cooking'    | : | <i>keitti</i>                   | 'cooked'              | (diary)           |
|     | <i>kerää</i>   | 'is collecting' | : | <i>*keri</i> (= <i>keräsi</i> ) | 'collected'           | (diary)           |
|     | <i>laittaa</i> | 'puts'          | : | <i>laitto</i>                   | 'put'                 | (diary + record.) |
|     | <i>loppuu</i>  | 'ends'          | : | <i>loppu</i>                    | 'ended'               | (diary)           |
|     | <i>lähtee</i>  | 'goes away'     | : | <i>lähti</i>                    | 'went away'           | (diary)           |
|     | <i>menee</i>   | 'goes'          | : | <i>meni</i>                     | 'went'                | (diary)           |
|     | <i>muistaa</i> | 'remembers'     | : | <i>muisti</i>                   | 'remembered'          | (record.)         |
|     | <i>on</i>      | 'is'            | : | <i>oli</i>                      | 'was'                 | (diary)           |
|     | <i>ottaa</i>   | 'takes'         | : | <i>otti</i>                     | 'took'                | (diary)           |
|     | <i>pesee</i>   | 'washes'        | : | <i>pesi</i>                     | 'washed'              | (record.)         |
|     | <i>pitää</i>   | 'holds'         | : | <i>piti</i>                     | 'held'                | (diary)           |
|     | <i>putoo</i>   | 'is falling'    | : | <i>*puto ~ putos</i>            | 'fell'                | (diary)           |
|     | <i>saa</i>     | 'gets'          | : | <i>sai</i>                      | 'got'                 | (diary)           |
|     | <i>sanoo</i>   | 'says'          | : | <i>sano</i>                     | 'said'                | (diary)           |
|     | <i>syö</i>     | 'is eating'     | : | <i>söi ~ *syöi</i>              | 'ate'                 | (diary)           |
|     | <i>syöttää</i> | 'feeds'         | : | <i>syötti</i>                   | 'feeded'              | (diary)           |
|     | <i>tulee</i>   | 'is coming'     | : | <i>tuli</i>                     | 'came'                | (diary)           |
|     | <i>vaihtaa</i> | 'changes'       | : | <i>vaihto</i>                   | 'changed' (-ht->-tt-) | (diary)           |
|     | <i>vetää</i>   | 'pulls'         | : | <i>veti</i>                     | 'pulled'              | (diary)           |
|     | <i>vie</i>     | 'takes away'    | : | <i>*viei</i> (= <i>vei</i> )    | 'took away'           | (diary)           |

In the recorded material there are just a few 2S imperative forms. Nevertheless, in the recording 1;7.28 there is also one imperative (*kato* 'look') which contrasts with the 3S indicative form of the same verb, namely *kattoo* 'is looking' (the Standard Finnish stem *katso-* 'to look' is in colloquial Finnish phonetically modified to *kat(t)o-*).

The next verb categories to emerge were passive, negation, 1S and the infinitives, particularly the 1<sup>st</sup> infinitive and the illative of the 3<sup>rd</sup> infinitive. These will be examined in detail in section 5.2., but some preliminary comments are presented already now.

The first (formulaic) passive form used by Tuulikki was 1;4 *mennään* 'let's go'. In the recordings made at the age of 1;7 there are also some shortened passive forms, but these are either imitated and truncated (in 1;7.28: *laite* < *laitetaan* 'let's put') or belong to a rhyme (in 1;7.23: *saadaan kaloja* 'we will get some fish'). In spoken Finnish, the 1P forms have mostly been replaced by the passive forms.

The first negation form was used by Tuulikki in the verb *olla* 'to be, to exist' at the age of 1;7: *on* 'is' : *ei oo* 'is not' (colloquial variant of the

negation, Standard Finnish *ei ole*). Together with the preterite these two forms established a three-member suppletive paradigm *on* 'is' : *oli* 'was' : *ei oo* 'is not'. At the age of 1;8 negation also occurred in the following oppositions: *autti* 'helped' (an analogical form, normally *auttoi* 'helped') vs. *ei isi auta* 'Father shall not help' (negation used in a modal context) and *putoo* 'is falling' : *ei pulo* 'does/did not fall' (truncated form of the main verb).

The first verb in 1S present indicative registered from Tuulikki's speech was 1;6 *kuulen* 'I hear'. This form was used by Tuulikki as an appropriate answer to the question *kuuletko?* 'do you hear' (the noise of the refrigerator). At the age of 1;8 Tuulikki used two variants of her playful ultimatum: *muuten suutun* ~ *muuten suuttuu* 'otherwise I will get angry ~ otherwise gets angry'. This seems to be the first candidate for the formal (but not yet semantic) opposition of 1S and 3S indicative. In general, the different persons of active emerged rather slowly: 1S was used more frequently first at 1;11. The 2S and 2P were used only in a few isolated forms in the recorded material.

The verb *nukkua* 'to sleep' was used by Tuulikki frequently in the 3S form. At the age of 1;8 she also tried to use the illative of the 3<sup>rd</sup> infinitive (*nukku+ma+an*), but because of the trochaic tendency she shortened the form: *ei vielä nukku* 'not yet sleep-', *ihan vielä nukku* 'quite yet sleep-' and *pankkii nukkuu* 'on the balcony to sleep' (the last form seems to represent the colloquial variant of the illative of the 3<sup>rd</sup> infinitive, *nukku+un*, where the *ma*-suffix of the 3<sup>rd</sup> infinitive is dropped). At this age Tuulikki also used the colloquial preterite *nukku*.

## 5.2. The first three-member miniparadigms of Tuulikki

At the age of 1;7 Tuulikki started to use three-member miniparadigms. One of these was suppletive: Tuulikki used from the verb *olla* 'to be, to exist' the 3S present indicative *on* 'is', the colloquial variant of the negation form *ei oo* 'is not' and the 3S preterite *oli* 'was'.

Another candidate for a three-member miniparadigm at the age of 1;7 was the verb *laittaa* 'to put'. From this verb, Tuulikki used the 3S *laittaa* 'puts', the analogical preterite *laitti* (= *laittoi*) 'put' and (in an answer to a question, recorded session 1;7:28) the shortened passive form *laite* (= *laitetaan*) 'let's put'. Here the passive suffix itself is dropped but the passive is nevertheless signalled by the change of the final stem vowel from *a*

to *e* (*laita-* > *laite*). All these forms appear in the recording 1;7. The trochaic phase of Tuulikki explains why the trisyllabic *laitetaan* 'let's put' was shortened; nevertheless, the shortened form *laite* was used as an adequate answer to the question *laitetaanko ...?* 'shall we put...?'

At the age of 1;8 Tuulikki had several three-member miniparadigms. One type of miniparadigms consisted of the three early verb forms: 2S imperative, 3S present indicative and 3S preterite. These forms were used from two verbs: *anna* 'give!' (diary + rec.) : *antaa* 'is giving' (diary) : *anto(i)* 'gave' (diary) and *tule* ~ *tu(u)* 'come!' (diary) : *tulee* 'is coming' (diary + rec.) : *tuli* 'came' (diary).

These two paradigms are fairly transparent, although in the first one there are certain stem alternations: grade alternation (*nt* : *nn*) and the alternation *a* ~ *o* in the final stem vowel. From the second verb, the passive preterite was also used: *tultiin* 'we came'. The passive is based on the consonant stem, which makes it less transparent.

Another type of miniparadigms consisted of 3S active (present and preterite, both frequently registered) and passive in the function of 1P (the passive present *mennään* was attested already at the age of 1;4, now also passive preterite and negation): *menee* 'goes' (diary + rec.) : *meni* 'went' (diary) : *mennään* 'let's go' (diary) : *mentiin* 'we went' (diary) : *ei mennä* 'we shall not go' (diary). Tuulikki also used the 2S imperative from this verb, but there is only one occurrence in the diary data. The paradigm is fairly transparent, although the passive forms are based on the consonant stem.

A third type of miniparadigms included the negation form. The suppletive paradigm of the verb *olla* 'to be, to exist' was already mentioned: *on* 'is', *ei oo* 'is not' and *oli* 'was'. The corresponding forms were also used from the verb *ottaa* 'to take', but the negation form *ei ota* 'does not take' was used only during the last day of the age month 1;8 and only in the context of eating. These forms (3S present and preterite + negation) were furthermore used from the verb *saada* 'to get; may', but the negation form belonged to the modal use of this verb (*ei saa* 'must not') and the two other forms to the meaning 'to get' (3S present *saa* 'gets' and preterite *sai* 'got'). One further candidate for this group of miniparadigms is *pudota* 'to fall' with the forms *putoo* 'is falling', *ei pulo* 'does/did not fall' : *puto(s)* 'fell', but the forms of this contracted verb were both truncated and influenced by analogy. These are not complete three-member miniparadigms but nevertheless they show that the 3S negation form is becoming productive.

Within the first miniparadigms, one special case was the verb *syödä* ‘to eat’. At the age of 1;8 Tuulikki used many forms of this verb, at least the following nine: *syö* (3S present indicative, diary + rec.) ‘is eating’, *syö!* (2S imperative, diary), *söi* ~ *\*syöi* (3S preterite, both regular and analogical, diary) ‘ate’, *syömään* (illative of the 3<sup>rd</sup> infinitive, diary) ‘go eating’, *syödään* (the present tense of the pseudopassive used in the function of 1P, diary + rec.) ‘let’s eat’, *syötiin* (preterite of passive, diary) ‘was eaten’, *syönyt* (past participle of active, e.g. *syönyp paljon* ‘has eaten much’, diary) ‘has eaten’, *syöty* (past participle of passive, e.g. *syöty kaikki* ‘all has been eaten up’, diary) ‘has been eaten’, *syödä /tyälä/* (1<sup>st</sup> infinitive, e.g. *tyälä puuvoo* ‘to eat porridge’, diary + rec.). Some of these nine forms have been registered only once or twice, but the following ones were used frequently and were registered at least three times: *syö*, *söi* ~ *syöi* (both variants), and *syödään*.

In sum: at the age of 1;8 Tuulikki had at least the following true miniparadigms:

1. *anna* ‘give!’ (2S imperative) : *antaa* ‘is giving’ (3S indicative) : *anto(i)* ‘gave’ (3S preterite)
2. *tule* ~ *tu(u)* ‘come!’ (2S imperative) : *tulee* ‘is coming’ (3S indicative) : *tuli* ‘came’ (3S preterite)
3. *menee* ‘goes’ (3S indicative) : *meni* ‘went’ (3S preterite) : *mennään* ‘let’s go’ (passive present in the function of 1P): *mentiin* ‘we went’ (passive past in the function of 1P) : *ei mennä* ‘we shall not go’ (passive negation form used in the function of 1P)
4. *on* ‘is’ (3S indicative) : *ei oo* ‘is not’ (colloquial 3S negation form) : *oli* ‘was’ (3S preterite)
5. *syö* ‘is eating’ (3S indicative) : *söi* ~ *syöi* (both variants) ‘ate’ (3S preterite) : *syödään* ‘let’s eat’ (passive present in the function of 1P); this is the only one that can be established on recordings alone

Further candidates for three-member miniparadigms at the age of 1;8 are *saada* (both modal use and the meaning ‘to get’) and *pudota* ‘to fall’.

The recordings 1;9 and 1;10 are short but they both include a few three-member miniparadigms, e.g. 1;9 *on* ‘is’ : *oli* ‘was’ : *ollaan* ‘we are’ : *oltiin* ‘we were’ (passive in the function of 1P), *menee* ‘goes’ : *mennään* ‘let’s go’ : *mentiin* ‘we went’ (passive in the function of 1P); 1;10 *tulee* ‘comes’ : *tule!* ‘come!’ : *tullaan* ‘we are coming’ (= passive in the function of 1P), *syö* ‘is eating’ : *syömään* ‘come to eat’ : *syödään* ‘let’s eat’ (= passive in the function of 1P). The number of the true miniparadigms is increased by

using diary data: the suppletive verb *olla* 'to be, to exist' was also used at the age of 1;10 and the miniparadigms used at 1;8 were all used at 1;9 and 1;10 as well.

In the recording 1;11 the following verbs have at least three different inflectional forms: *haluta* 'to want', *laskea* 'to release, to let off', *mennä* 'to go', *olla* 'to be, to exist', *ottaa* 'to take', *panna* 'to put', *tulla* 'to come'.

Unfortunately there is no recording from the age of 2;0.

In transcript 2;1 there are several miniparadigms of as many as 4 and more members. The following verbs have three or more different inflectional forms: *haluta* 'to want', *lukea* 'to read', *mennä* 'to go', *nukkua* 'to sleep', *olla* 'to be', *panna* 'to put', *saada* 'to get, to receive; may', *syödä* 'to eat'.

The number of the first three-member miniparadigms in Tuulikki's corpus (especially recordings; only recordings considered at 1;9 – 2;1) is presented in Table 3:

Table 3. Three-member paradigms used by Tuulikki at 1;7 – 2;1

| Age  | Number of miniparadigms:<br>non-suppletive | suppletive:<br><i>olla</i> 'to be' | special: further candidates              |
|------|--|------------------------------------|--|
| 1;7  | –  | 1                                  | 1 (including a shortened "passive" form) |
| 1;8  | 1 + 3 (rec. + diary)                       | 1                                  | 2 (almost miniparadigms)                 |
| 1;9  | 1 + 3 (rec. + diary)                       | 1                                  |  |
| 1;10 | 2 + 2 (rec. + diary)                       | 1                                  |  |
| 1;11 | 6 (only rec.)                              | 1                                  |  |
| 2;1  | 7 (only rec.)                              | 1                                  |  |

The verbs used in the early miniparadigms belong to the verb classes A, B (*syödä* 'to eat') and D; the contracted verbs (class C) were shifted to the class A (cf. section 6.).

### 5.3. The first contrasting verb-forms of Tuomas

The first verb of Tuomas occurring both in the present tense and in the preterite was 1;4 (and onwards) *tippu* 'fell down' vs. 1;6 *tippuu* 'is falling down' (when porridge was continuously dropping from the spoon onto the tablecloth). Interestingly enough, the past tense form of this verb emerged

first. In other verbs the present tense emerged first (e.g. 1;7 *lähtee* ‘goes’ vs. 1;8 *lähti* ‘went’, 1;7 *hyppää* ‘jumps’ vs. 1;8 *hyppäs* ‘jumped’) or at the same time as the past tense (e.g. 1;7 *kaatuu* ‘is falling’ vs. *kaatu* ‘fell’ and 1;8 *auttaa* ‘helps’ vs. *autti* ‘helped’).

Another early contrast was the opposition of 2S imperative and 3S indicative, e.g. 1;7 *kato* ‘look!’ (formulaic, used often with a pointing gesture) vs. *kattoo* ‘is looking’.

On the basis of diary data, the first miniparadigm of Tuomas with at least three members was 1;7 *kato* ‘look!’ : *kattoo* ‘is looking’ : *katottiin* ‘was looked’ (passive preterite) : *kattomaan* ‘to look’ (illative of the 3<sup>rd</sup> infinitive). Another candidate for an early miniparadigm consisted of forms based on the consonant stem: 1;7 *pestään* ‘let’s wash’ : *pestä* ‘to wash’ : *pesty* ‘has been washed’. These three forms were used frequently by Tuomas but they were rote-learned and used only in connection with the washing routines. Moreover, the passive past participle *pesty* was the only representative of this inflectional category and should thus not be counted as such an inflectional form that could be a real paradigm member in this phase. This formula could be interpreted as an announcement such as ‘ready with the washing’ or ‘washing done’.

#### 5.4. Miniparadigms and the emergence of categories

The morphological categories that occurred in the first true miniparadigms of Tuulikki were the same that also in general emerged early (cf. Toivainen 1980): 2S imperative, 3S indicative present and preterite, passive (in the function of 1P) and the 3S negation form. The morphological contrasts in the first true miniparadigms were the following:

- (7) a. 3S imperative 2S vs. 3S indicative  
 1;7 *kato* ‘look!’ : *kattoo* ‘is looking at’
- b. 3S indicative present vs. preterite  
 1;7 *heittää* ‘throws’ : *heitti* ‘threw’  
 1;7 *kaatuu* ‘falls’ : *kaatu* ‘fell’  
 1;7 *laittaa* ‘puts’ : \**laitti* ‘put’ (= *laittoi*)  
 1;7 *nukkuu* ‘is sleeping’ : *nukku* ‘slept’
- c. 3S indicative affirmative vs. negative  
 1;8 *on* ‘is’ : *ei ole* ~ *ei oo* ‘is not’  
 1;11 *haluaa* ~ *haluu* ‘wants’ : *ei halua* ‘does not want’

1;11 *mahtuu* 'fits' : *ei mahdu /mahu/* 'does not fit'

d. 3S active vs. passive (in the function of 1P)

1;8 *menee* 'goes' : *mennään* 'let's go' (also: 'we are going'))

1;8 *syö* 'eats' : *syödään* 'let's eat' (also: 'we are eating')

e. passive (in the function of 1P) present vs. past

1;9 *mennään* 'let's go' : *mentiin* 'we went'

1;9 *ollaan* 'we are' : *oltiin* 'we were'

In the speech of Tuomas, the first contrasts were very similar to those attested from the speech of Tuulikki (all the examples in 8 below are from the age of 1;7):

(8) 2S imperative vs. 3S indicative, e.g.

*kato* 'look!' : *kattoo* 'is looking at'

3S indicative present vs. preterite, e.g.

*tippuu* 'is falling down' : *tippu* 'fell down'

3S active vs. passive (in the function of 1P), e.g.

*menee* 'goes' : *mennään* 'let's go'

finite forms vs. 3<sup>rd</sup> infinitive illative, e.g.

*nukkuu* 'is sleeping' : *nukkumaan* 'to sleep'

## 6. Analogical formations

### 6.1. The formation of the preterite (past tense): Class shifts

Most of the early analogical verb forms in Tuulikki's speech were past tense (preterite) forms. There is in principle only one preterite suffix in Finnish, namely *-i*. But because of the morphophonological interplay between this *i*-suffix and different stem-final phonemes, there are actually three preterite types in Standard Finnish: the past tense stem of the verb can end in

a) *-i* e.g. 3S *istuu* 'is sitting' : *istui* 'sat' (verb class A), *tulee* 'comes' : *tuli* 'came' (class D); 1S *istun* 'I sit' : *istuin* 'I sat', 2S *tulet* 'you come' : *tulit* 'you came';

b) *-si* e.g. 3S present *hyppää* 'jumps' vs. past *hyppäsi* 'jumped' (verb class C); the *si*-preterite is originally used only in contracted verbs but it has expanded to other verb classes in some Finnish

dialects and it often also expands in child language (presumably due to greater saliency);

- c) *-oi* (in certain A-class verbs with a stem-final *a*, where the stem-final *a* > *o* before the *i*-suffix), e.g. 3S *antaa* 'gives' : *antoi* 'gave'; in spoken Finnish, these preterites often lose their final *i* and variants such as *anto* are thus also used. This class is supported by *o*-stems having the *i*-suffix, e.g. *sano-* 'to say' : *sanoi* 'said'.

In colloquial Finnish there is still a fourth type: the labial final vowel of the 3S present is shortened in the preterite, e.g. *istuu* 'is sitting' : *istu* 'sat' (Standard Finnish *istui*), *sanoo* 'says' : *sano* 'said' (SF *sanoi*).

The first types to emerge in child language are, in addition to the colloquial one, especially the *i*-type and the *si*-type (cf. Lieko 1994: 82). These two productive types also often expand beyond the limits of their normal use. The child usually starts from either the *i*- or the *si*-preterites but later, when the child acquires other preterite types, these new types may also expand beyond their normal use; this holds to some degree also for the *oi*-type.

Tuulikki started her past tense formation from colloquial vowel shortening (*tippuu* 'is falling' vs. *tippu* 'fell') and the *i*-type; she used analogical preterite forms from the age of 1;8 on, especially in contracted verbs and in monosyllabic verbs. The first (formulaic) past tense forms used by Tuulikki were 1;5 *tippu* 'fell' and 1;6 *loppu* /*poppu* 'ended'.

From the age of 1;7 onwards, Tuulikki used preterites formed by the *i*-suffix, e.g. *heitti* 'threw' (cf. *heittää* 'throws'). The first analogical preterite *sati* (from the verb *sataa* 'to rain', standard preterite *satoi* 'it was raining') was followed by an immediate self-correction: 1;7 *lunta sati* / *sato* 'it was snowing'. At the age of 1;8 the *i*-type of preterite was also used by Tuulikki in the contracted verbs. It is possible that the inflectional classes were still not acquired and the child assumes more or less the same inflection for all verbs. Another possibility is analogical levelling. For example, the verb *kerätä* 'collect' was not inflected as a contracted verb but as a verb of the class A:

- (9) *kerää* 'is collecting' : *keri* 'collected' (pro *keräsi* 'collected')

The inflection model is constituted by the A-class verbs ending in *-ää* in the present tense:

- (10) *heittää* 'throws' : *heitti* 'threw'  
*vetää* 'pulls' : *veti* 'pulled'

Similar forms of contracted verbs were also used later, for example 1;9 *kiipee* : *kiipi* (instead of *kiipesi* 'climbed'; in this verb ending in *-ee* the inflectional model is constituted by such A-class verbs as *lukee* 'is reading' : *luki* 'read', *tulee* 'comes' : *tuli* 'came'). Another example: 1;10 *harjaa* : *harjo* (instead of *harjasi* 'brushed'; here the model is *antaa* 'gives' : *anto(i)* 'gave').

The link between these two inflections – the A-class with only minor (if any) stem alternations and the C-class consisting of contracted verbs with rather complex stem alternations – is probably the 3S present tense, which has a similar shape in both verb classes: word-final long vowel (cf. the 3S forms mentioned above: *kerää* – *heittää*, *vetää*; *kiipee* – *lukee*, *kylpee*; *harjaa* – *antaa*, *auttaa*). The other inflectional forms are rather different, but the differences are partially levelled out in early child language by the use of analogical forms when the respective forms of contracted verbs have not yet emerged.

Tuulikki also used the *i*-type preterite instead of the *oi*-type, e.g. *laittaa* : *laitti* (instead of *laittoi* 'put'). The tendency to replace the relatively rare *oi*-type (e.g. *laittaa* : *laittoi*) with the very frequent *i*-type (e.g. *nostaa* 'lifts' : *nosti* 'lifted', *ottaa* 'takes' : *otti* 'took') where the *i*-suffix causes the deletion of the stem-final vowel, is a common phenomenon both in child language and in certain spoken variants of Finnish (e.g. dialects).

At the age of 1;11 Tuulikki started to use *s(i)*-preterites in contracted verbs, e.g. *putoo* ~ *putoaa* 'is falling' : *putos* (< *putosi*) 'fell down', *pelkää* 'is afraid of' : *pelkäs* (< *pelkäsi*) 'was afraid of', *tykkää* 'likes' : *tykkäs* (< *tykkäsi*) 'liked', *haluu* ~ *haluaa* 'wants' : *halus* (< *halusi*) 'wanted'. This new preterite type (schematically: 3S present -VV, preterite -Vsi) expanded to other verbs than the contracted ones, e.g. 1;11 *hakes* 'fetched' (instead of *haki*, cf. 3S present tense *hakee*), *lennäs* 'flew' (instead of *lensi*, stem of the present is *lentä-* ~ *lennä-*), 2;0 *auttasin* 'I helped' (instead of *autoin*, cf. 3S present tense *auttaa*), *hakes* 'fetched', *nauras* 'laughed' (instead of *nauroi*, cf. 3S present tense *nauraa*). This analogical expansion was soon weakened, but interestingly enough, in one group of verbs it remained and flourished: in the *i*-stems, in which the opposition of present and preterite has no overt marking in the 1<sup>st</sup> and 2<sup>nd</sup> person (both SG and PL) in Standard Finnish (cf. *leikin* 'I play' vs. *leikin* 'I played', *leikimme* 'we are playing' vs. *leikimme* 'we were playing'). Here the analogical

expansion of the *si*-preterite provides the opportunity to mark the preterite forms with the *si*-element. This possibility was utilized by Tuulikki, e.g. 2;3 *leikkisin* 'I played', *poimisin* 'I picked up' (Standard Finnish *poimin*, identical with the present tense *poimin*), 2;5 *tönisin* 'I jostled' (Standard Finnish *tönnin*, identical with the present tense *tönnin*), *yskisin* 'I coughed' (Standard Finnish *yskin*, identical with the present tense *yskin*). This is a good example of constructional iconicity. Similar expansion of the *si*-preterite also appears in certain adult spoken variants of Finnish (e.g. in the SW dialects) and in Estonian.

In the same way as Tuulikki, so also Tuomas started from the *i*-type and expanded it to certain *oi*-preterites, e.g. 1;8 *ajaa* 'is driving' : *aji* (instead of *ajoi* 'drove') and *auttaa* 'helps' : *autti* (instead of *auttoi* 'helped'). A little later, Tuomas began to use the *s*-type in contracted verbs (1;9 *avaa* 'opens' : *avas* 'opened', *piippaa* 'is beeping' : *piippas* 'beeped', *toppaa* 'stops' : *toppas* 'stopped') and favoured it in expense of other types, both of the *oi*-type (1;9 *auttaa* 'helps' : *auttas* instead of *auttoi* 'helped', *laittaa* 'puts' : *laittas* instead of *laittoi* 'put'), and of the *i*-type (1;9 *ylttää* 'reaches' : *ylttäs* instead of *yltti* 'reached' and *itkee* 'is crying' : *itkes* instead of *itki* 'cried').

In the class of monosyllabic verbs, the preterite is formed by diphthong change (present *syö* 'is eating' : preterite *söi* 'ate', present *vie* 'takes away' : preterite *vei* etc.) or the formation of a diphthong from a long vowel (e.g. *saa* 'gets' : *sai* 'got'). This type of preterites usually emerges first in child language (e.g. Tuulikki 1;7 *söi*, *vei*) and it is an example of rote learning of frequent forms in the beginning of the acquisition process. Later on many Finnish-speaking children produce more transparent (= without changes in the stem) analogical preterite forms like *syö+i* 'söi', *vie+i* 'vei' despite of their articulatory difficulties (triphthongs instead of diphthongs), e.g. Tuulikki 1;8 *syöi*, *vei*. These analogical forms evidence that the child is actively processing morphological elements.

## 6.2. Other early types of analogies: Class shifts

Typical early analogies in verb inflection are the expansion of the alternation between short final vowel in 2S imperative and long final vowel in 3S indicative to verbs which do not have this alternation in the standard language. This alternation of the A-class verbs (e.g. *ota* 'take!' : *ottaa* 'takes', *kato* 'look!' : *kattoo* 'looks', *tule* 'come!' : *tulee* 'comes') is easily

expanded by children to the contracted verbs, e.g. Tuulikki 1;10 2S imperative *leika* 'cut!' (instead of *leikkaa*, cf. the 3S indicative *leikkaa*), 1;11 2S neg. imperative *älä napa* 'don't take!' (instead of *älä nappaa*, cf. the 3S indicative *nappaa*).

The first analogical forms are an indication of the child's own active processing of the elements of language. The very first isolated analogies of Tuulikki were observed at the age of 1;7 (*\*sati* instead of *satoi*), more systematic analogies were frequent at the age of 1;8. Thus the age of 1;8 can be regarded as the onset of the protomorphological period.

## 7. Syntactic development: Some preliminary observations

The one-word stage of Tuulikki continued till the age of 1;5. At 1;5 Tuulikki used mostly 1- and 2-word utterances but at the end of 1;5 she produced some isolated 3-word utterances, e.g.

- (11) *kukka kakka mane* (= forms used by Tuulikki;  
the illative suffix is missing)  
*sukka jalkaan pane* (= Standard Finnish)  
the sock foot(-ILLATIVE) put  
'put the sock on the foot (illative, literally: in the foot)'

At the age of 1;6 Tuulikki combined the subject and the predicate verb with an adverbial, e.g. when playing a jigsaw puzzle she said

- (12) *talo tähän sopii /topii/*  
the house here (illative) fits  
'the house fits in here'

The case marking of the adverbial was sometimes defective. In the following example, the illative suffix from *kuppi+in* 'into the cup' is missing:

- (13) *kaataa isi kuppi*  
is pouring father cup  
'Father is pouring (tea) into the cup'

Nominal suffix elements were often dropped still at the age of 1;7, especially in longer utterances, e.g. *Puppe nuukkii* (= *nuuhkii*) *kissa* (= *kissaa*) 'Puppe (= a dog) sniffs the cat' (no object marking) and *hakee Tuuti Leego pali* (= *palikan*) 'fetches Tuuti (= Tuulikki) the Lego brick' (last word

truncated, both the derivation element *-kka* and the accusative suffix *-n* are missing). In both sentences there is no morphological marking of the object but both the subject and the object are well specified by the word order.

At the age of 1;8 Tuulikki used some 4-word utterances, e.g. *vesimuki(n) mukaan tarttee Tuuti* ‘the water mug along needs Tuuti’, *kantaa Tuuti hatun tinne* (= sinne) ‘carries Tuuti the hat over there’. The marking of the object was accurate, and this made it possible for Tuulikki to use exceptional word order (OVS and VSO instead of the usual SVO of Finnish). At this age she started to use the morphological resources of the language more effectively, and this was also reflected in her use of verb forms.

## 8. Conclusion: From first verb forms to verbal inflection

Finnish-speaking children start their use of verbs from the two basic forms, the 2S imperative (e.g. *kato* ‘look!’, *anna* ‘give!’) and the 3S present indicative. Typically, only one or the other is used from a given verb, but a few combinations (two-member miniparadigms) of these basic forms are also used early. This is easier to verify with diary data (cf. 4.3), because imperatives are not frequently used in the recordings. These two verb forms have very little if any morphological marking (depending on the verb class) and they are thus typical to premorphology: rote learned base forms which are mapped to certain situational contexts.

These two morphological categories of verbs also emerge early in many other languages, for example in German (Klumpfer 2000), in Lithuanian (Wojcik, this volume), in Croatian (Katičić, this volume) and in English (Gülzow, this volume); the English *ing*-form corresponds in many cases to the Finnish 3S present tense form. But the infinitives emerge only later in Finnish. In many other languages the infinitive of the verb is used quite early by the children, yet these early infinitives may also be “root infinitives” used in the function of other verb forms (see e.g. Gülzow, this volume for English).

It is interesting to note that – apparently for pragmatic reasons – the 2S imperatives of certain verbs are used by small children acquiring quite different languages. For example, the first verb form used by Tuulikki was the 2S imperative (*k)ato* ‘look!’, the 2S imperative of the verb meaning ‘look’ is also one of the early (frozen) verb forms used by an Austrian girl (Klumpfer 2000). In a similar way, one of the earliest verb forms of

Tuulikki and the very first of Tuomas was the 2S imperative *anna* 'give!', which has about the same pragmatic content as the early amalgam *b(r)auchich* 'I need' used by the Austrian girl Katharina (Klampfer 2000).

In what order are the inflectional suffixes typically acquired in Finnish child language? In his study based on the recorded material of 25 Finnish-speaking children aged 1 – 3 years, Toivainen (1980: 33, 44, 160–163) defined the following serial order of the first suffix elements (the order is based by the age of the median child in his material; the verb categories are given in italics): *basic forms of verbs* (= 2S imperative and 3S indicative), *partitive*, *past tense (preterite)*, *neg. construction*, *adessive (adverbs)*, *illative*, *inessive and allative (adverbs)*, *1<sup>st</sup> person singular*, *adessive, plural -i-*, *genitive (attribute)*, *passive*, *inessive*, *accusative*, *allative*, *perfect 3<sup>rd</sup> singular*, *3<sup>rd</sup> inf. illative*, *plural -t*. As can be seen, the verb suffixes and the nominal suffixes were acquired in a fairly balanced way, almost by turns.

The basic forms of Finnish nouns are nominative and partitive singular. Partitive is the first form to be used from uncountables (Toivainen 1980: 125; Laalo 1999: 363). A third early case form is the illative, the first local case form to be used by Finnish-speaking children. The first illatives are often used in an adverb-like manner (e.g. *kotiin* 'home', cf. nominative *koti*, *syliin* 'into the lap', cf. nominative *syli*). At the very beginning, children may use some rote-learned partitive and illative forms instead of verbs (cf. section 3. under b)).

Active morphological processing of nouns typically starts from the formation of genitive-accusatives which contrast clearly with nominatives. Active morphological processing of verbs often starts from the formation of past tense at about the same age. For example, Tuulikki started to produce both past tense forms and genitive-accusatives at 1;7, Tuomas at 1;8. Both nominal and verbal inflection thus start at about the same age.

The paradigm formation in verbs seems to begin with the production of 3S past tense forms; these contrast with 3S present tense forms of the same verbs. The early two-member miniparadigms of imperatives and indicatives (cf. 4.3 and 4.4) may also be based at least partly on morphological processing, but they may consist of two separate rote-learned forms as well.

The tempus domain is thus differentiated quite early, even before the productive use of 1S present tense forms (cf. Toivainen 1980: 162). This is quite different from e.g. German (Bittner, this volume; Klampfer 2000). The 3S past tense form is used relatively early not only in Finnish but also

in e.g. Yucatec Maya (Pfeiler, this volume) and Lithuanian (Wojcik, this volume).

Other verb forms used relatively early are the pseudopassives (present and past) in the function of 1P, the negation verb (3S *ei* 'does not') and the most frequent infinitive forms (the 1<sup>st</sup> infinitive and the illative of the 3<sup>rd</sup> infinitive). Passive forms in the function of 1P are at first used in formulaic expressions (e.g. *mennään* 'let's go!') but they soon become productive and are used in different forms, e.g. Tuulikki 1;8 *mennään* 'let's go' (passive present) : *mentiin* 'we went' (passive past) : *ei mennä* 'we shall not go' (passive neg.).

The first infinitive form to be used by Finnish-speaking children is typically the illative of the 3<sup>rd</sup> infinitive (Toivainen 1980: 163). In the recordings of Tuulikki, the illative of the 3<sup>rd</sup> infinitive was first (at 1;6) used in the expression *syömään* 'come to eat ~ let's go and eat' and at 1;8 in the expression *nukkumaan* 'let's go to sleep'. The inessive of the 3<sup>rd</sup> infinitive appeared only once in the recording 1;11. The 1<sup>st</sup> infinitive appeared once in the recording 1;8 (*syödä /syälä/* 'to eat') and thereafter not until at 1;11.

The suffix *A* is used in Standard Finnish both in verbs (1<sup>st</sup> infinitive) and nominals (partitive case). Some children start the active production of *A*-partitives at the same time as the production of *A*-infinitives. For example, Tuulikki used assimilated and contracted (= 2-syllabic) partitives still at 1;8 (e.g. *ovee* < *ovea*, *puuvoo* < *puuroa*). When she started to produce 3-syllabic *A*-partitives at 1;9 (e.g. *apua* 'help', *nakkia* 'some sausage', *namia* 'some yum-yum', *peukkua* 'thumb [object]'), she also started to produce *A*-infinitives at the same age (e.g. *nukkua* 'to sleep', *töniä* 'to jostle'; diary data).

Tuulikki started the active processing of morphological elements (genitive-accusatives of nouns and past tense forms of verbs) at the age of 1;7, Tuomas at 1;8. This start in both nominal and verbal inflection precedes protomorphology; the first three-member miniparadigm (suppletive) emerged at the same age. The first analogical forms and a number of non-suppletive miniparadigms emerged at the age of 1;8. This can be regarded as the onset of the protomorphological phase.

## Notes

- \* I would like to thank Wolfgang U. Dressler, Dagmar Bittner and Marianne Kilani-Schoch for their insightful comments. I am also grateful to Virginia Mattila for checking my English.
1. The latter form, “passive”, is used in spoken Finnish.
  2. The latter form is the “pseudopassive” used in the function of 1P.
  3. This “passive” form is based on the consonant stem.

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